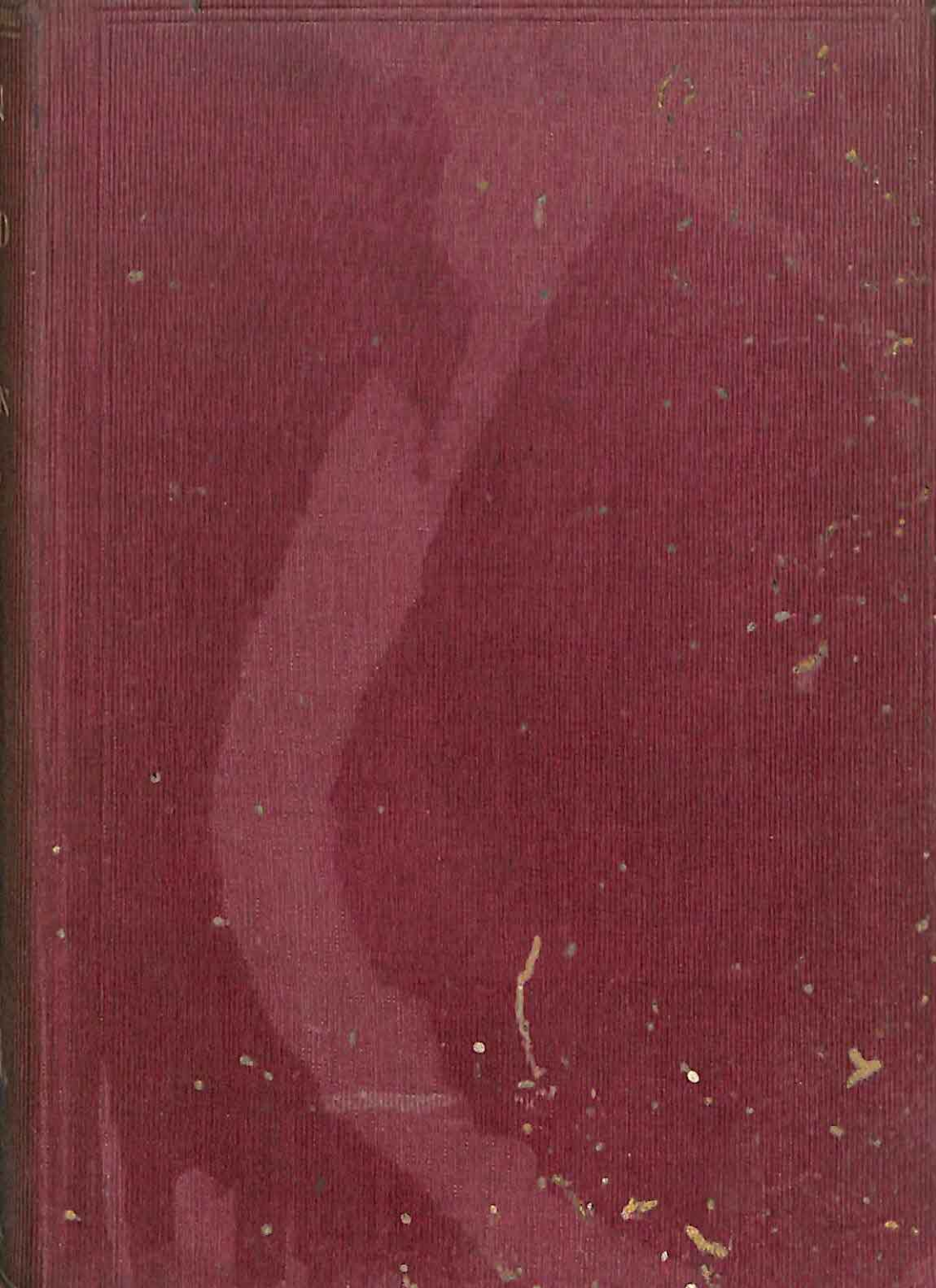






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CONTRIBUTORS TO VOLUME ONE

CLARENCE R. ATHEARN, PH.D.
SANFORD BATES, LL.D.
ETHEL J. DORGAN, PH.D.
FLORENCE S. DUNLOP, PH.D.
MARGARET FITZGERALD, B.S.
IRVING FUSFELD, A.M.
ROSE B. KRIPPNER, A.M.
MARY R. LEWIS, A.M.
CLARENCE D. O'CONNOR, A.M.
R. ROMAINE PRIOR, A.M.
LELA E. PROFFER, A.M.
E. LOUISE RUSH
ESTELLE E. SAMUELSON
MILDRED B. STANTON, PH.D.
HARRIS TAYLOR, LL.D.
JANE D. ZIMMERMAN, A.M.

EDUCATION OF THE HANDICAPPED

VOLUME ONE HISTORY

Edited by

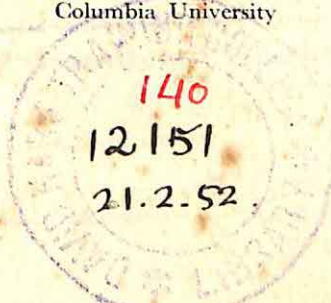
Merle E. Frampton Ph.D. LL.D.

Professor of Education
Teachers College
Columbia University

and

Hugh Grant Rowell A.B. M.D.

Assistant Professor of Education
Teachers College
Columbia University



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DEDICATION

To HOWLAND S. DAVIS

SUCCESSFUL FINANCIER, WISE PUBLIC
SERVANT, GENEROUS PHILANTHROPIST,
A LAYMAN WITH A PROFESSIONAL
UNDERSTANDING OF THE PROBLEMS OF
THE HANDICAPPED



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Introduction

"WROUGHT into the long experience of mankind are many factors which condition the life of every individual and the purposes and functions of man's institutions."¹

Thus a noted educator characterizes the social culture of the ages. The many factors have brought changes during the course of time, which have produced either successive improvements or retardations in the progress of human history. Whatever their effect has been upon the normal individual, they have also provided him with weapons whereby he may combat the evils within his social environment. But the effect upon handicapped individuals, more often than not, has been to make them victims rather than beneficiaries of these conditioning factors and attitudes.

The handicapped through the ages, generally speaking, have been unable to help themselves in this chaotic process called "life." Their utter dependence upon the normal social order has too often worked for their exploitation or destruction. Their story on the pages of world history is tragic and pathetic.

Since the handicapped have lived, however sadly, in the world of normals, this story not only reveals their particular plight but also reflects the successive struggles and conflicts of man in his efforts to build for national stabilization, a stabilization in which the handicapped hoped to share and even to make their contribution. In this sense, to study the history of the

¹ Reisner, Edward H., et al., *Educational Foundations*. Bureau of Publications, Teachers College, Columbia University, New York; February, 1937.

Introduction

handicapped is to study the history of the world and human progress and social evolution.

But it must not be forgotten that, in addition to any problems arising from their membership in a changing world, the handicapped had peculiar problems of their own. These problems, even if intensified by relations to the world of normal beings, had their bases in the deviations which placed the handicapped in a classification or classifications by themselves — in somewhat of a world of their own and with their own destinies to consider.

It is the purpose of the authors to chronicle historically in this volume those factors and influences which have conditioned the destiny of the handicapped in particular cultures as well as in their respective areas.¹ Of great importance for the guidance of programs of the present and the future must be a chronological review of the emergence of the recognition of the specific problems involved in the care and education of the handicapped and the evolution of the approved practices of the present. These, as well as the emerging trends and attitudes, will determine the next advances in the interests of the welfare of the handicapped. Thus the program of the future must rise from the trials, errors, and victories of the past and the present.

To meet this challenge, the authors plan to present their material on the handicapped in two sections. The *first*, this present volume, is devoted to revealing the growth, through the ages, of the care and education of the handicapped, with stress upon those things in

¹See page 1.

the past which have influenced the present or may influence the future either positively or negatively. Since great personages rather than momentous events have been the outstanding influences in this history, the material has been organized generally on the basis of the Great Man Theory.

One exception had to be made to this formula. The historical aspects of the work with the socially handicapped contribute but little constructively to the picture of the development of the care provided for this group. Accordingly, in the contribution of Dr. Sanford Bates, the situation is treated as an integrated unit.

Building upon the firm foundation of the contributions of the past, the *second volume* will discuss the philosophy underlying the care and education of these deviates in a contemporary society. It will deal specifically with relevant and pertinent problems, attitudes, and trends (where recognizable) of the present time, with some consideration of the future. Yet it must be admitted in advance that the uncertain social status of the moment makes it almost impossible to analyze the present, or even the past, in terms of its contributions to and influence upon the future until such time as the future becomes less nebulous, not only for the handicapped but for man in general.

The difficulties in assembling material of this type are limitless. Much basic evidence is obscure or inaccessible, chronicled records are incomplete and often contradictory, and recognition of problems involved has been in particular areas rather than in interrelationships. A wide range of resources and persons has been used to secure as accurate and expansive material

as is possible. Even so, some statements from authentic sources have undoubtedly been interpretations of individuals with a particular point of view, with which readers may disagree. In some instances given dates and the spelling of certain terms and names are at variance. Versions of the same incident are frequently misleading.

In such matters the editors have made decisions in keeping with the purpose of the book; namely, to present materials of such nature as to afford complete orientation in the fields of the handicapped not only for the reader, but also for the student of and the worker in problems of the care and education of the handicapped. Points of view were selected upon the basis of impartiality and approximate accuracy. The large number of contributors to these volumes is ample evidence that the complexity of the problem has been recognized constructively. This, in itself, bespeaks hope for the future.

Any success that these two volumes may achieve will be due largely to the willingness of so many teachers to make personal sacrifices to aid, through their contributions, the work to which they have devoted their lives and careers. To them our deepest gratitude!

MERLE E. FRAMPTON
HUGH GRANT ROWELL

Chapter One

THE HANDICAPPED AS A GROUP

FOR the purposes of education, the handicapped may be divided into four large classifications: (1) the physically handicapped, (2) the mentally handicapped, (3) the socially handicapped, and (4) persons with combinations of physical, mental, or social handicaps.¹

The physically handicapped may be subdivided into three groups: (a) those whose handicap involves one or more special senses, including the blind, the partially-sighted, the deaf, the hard-of-hearing, and the deaf and blind; (b) those whose handicap results in motor disability or limitation, including orthopedic cases (infantile paralysis, spastic conditions, osteomyelitis, bone tuberculosis, and congenital defects and deformities); cardiacs; those suffering from respiratory diseases in certain stages; malnutrition cases; and (c) those with various types of defective speech of whatever origin.

The mentally handicapped include: (a) persons who in native intellectual capacity fall in the lower ranges of human intelligence; for example, low average, morons, feeble-minded, imbeciles, and idiots; (b) persons who have suffered accident or disease resulting in impairment of mental functions; and (c) persons suffering from emotional instability, psychopathic states, and insanity. Among the mentally handicapped are types educable in regular classes, in special classes, in homes,

¹ The classification of the handicapped, for the purpose of the ensuing discussions, is based upon that developed as the foundation of the curriculum of the Department of the Education of the Handicapped at Teachers College, Columbia University.

or in special institutions. At present the limits of educability of such persons are more or less determined by the native endowment of the individual, and the function of education of the mentally handicapped is considered largely a matter of choice and preparation for lower-level occupations which involve only simple skill or elementary repetitive mental processes. It is believed, however, that much may be done for the mentally handicapped through provision of opportunities for the enrichment of their lives.

The socially handicapped may be differentiated from the physically or mentally handicapped (though physical and mental handicaps may be contributory or coexistent) by the fact that their chief limitation in meeting the problems of life appears in behavior maladjustments; for example, in delinquency, destitution, dependency, or crime. While the socially handicapping potentialities of physical and mental defects are recognized, such cases should not be placed among the socially handicapped until true and somewhat permanent social pathology develops in the individual. The group of the socially handicapped, undoubtedly, includes the largest number of persons and the widest ramification of problems. At present, due to rapidly shifting points of view, it is probably the least understood and the least stabilized.

The various types of socially handicapped, even in the restricted sense in which the expression is used, are too many for enumeration. They range from those who may be educated in regular or special classes to those who must be segregated in special institutions, such as homes for the aged or the destitute, homes for

delinquents, juvenile institutions like those for orphans, or prisons. In the larger sense the socially handicapped embrace all persons who, through accident, disease, or maladjustment on their own part, or the exigencies of society, fail to achieve and maintain a fairly normal economic and social status.

Owing to the fact that the work with the socially handicapped is still in an experimental stage, it contributes little of definite nature to a historical discussion. While its historical background is negligible, its significance in the educational pattern is paramount, inasmuch as it cuts through every area of human accomplishment and integrates every successful program of achievement. Therefore the socially handicapped group must be considered as a basic unit in each and every area of the handicapped.

SPECIAL FACTORS IN THE HISTORY OF THE CARE AND EDUCATION OF THE HANDICAPPED

Even at present it is often felt that the handicapped are more the problem of the physician than the educator. Certainly medical treatment seems to be provided for them, even under modern social plans, long before their education is considered. If their history is closely allied with medical history, it must be remembered that medical history was never recorded in the manner of national conflicts or the various social activities of an age. Mysticism and secrecy prevailed among the Aesculapians. It may well be that, in addition to the lost medical arts of certain nations like the Egyptians, there may have disappeared also the record of

their actual care and training of the handicapped. On the other hand, it is generally felt that the type of social feeling that underlies real care for the handicapped is of recent origin, following the spread of Christianity.

The history of the care and training of the handicapped must of necessity follow social and educational trends rather than create them. The wounded do not form the advance guard for an army. It must also be added that, as often as not, it has been impossible for the educator of the handicapped to follow an educational trend, at least for a long period. The reason is simple enough. With the handicapped there are physical or mental barriers to be crossed which do not exist in normals. It is the crossing of those barriers that actually constitutes the special education of the various types of the handicapped. To cross such barriers, their nature must be known. This implies that medical science must first analyze the physical or mental barrier, which may be impaired or lost vision, or a similar difficulty with the hearing or speech or other physical disabilities. Scientific medicine is recent. The day of the "humors" as an explanation of pathology is only just past. Mental measurement is new.

Having learned the physical or mental barrier to be crossed and something of its nature, the next step is to find a means of crossing it. In the work with the blind, carved letters and other devices were invented and tried unsuccessfully until the advent of braille produced a medium by which the barrier of lost vision could be hurdled. Even then, disagreements as to

technical matters prevented a universal braille until a few years ago.

In the case of the deaf and the hard-of-hearing, the stupidity and cupidity of man stand out. Here was lip reading, a device known to the monks. Here, too, was sign language. Yet for years these valuable methods of communication and socially short-circuiting impaired hearing seem to have been unused. And then the methods came into conflict!

As for the situation with speech defects, there was confusion worse confounded—and still is. Theory after theory and classification after classification and treatment after treatment have been proposed and defended. Where the true answer is distant, many are those who propose solutions.

But the fact is, the barriers have been studied and their true nature often discovered. Remedial measures have been worked out on a trial-and-error basis, the historical record of such experimentation being important if only that it need not be repeated by those working for the advancement of the various areas. Just why any particular remedy was found at a given time seems to have been a combination of interest and accident, thereby following the trend of other scientific discoveries. As often as not the discovery has come from someone, himself handicapped, who has sought some means of self-improvement, found it, and made it generally available. Interest, too, has often been aroused because of the handicap which considerably incapacitated some dear one. Likewise, when the work with the handicapped has attracted persons at all, it seems to have won them considerably or com-

pletely. One reason may have been that, in any age, some of its most distinguished personages were in one way or another handicapped. Nor may the social rôle of the fool be forgotten. For it was a large and influential one in many instances. More often than not, these fellows were handicapped.

From all these analyses, from the attempts to cross or pass around handicapping barriers, from the slow organization of the parts of the picture puzzle, from the efforts and devotion of interested persons, sometimes themselves handicapped, through the ages — and in spite of the queerest sort of opposition, at times — have evolved the modern care and education of the handicapped — a fascinating evolution.

THREE DISTINCT HISTORIC PERIODS

The history of the handicapped is greater than the aggregate of its separate areas and periods. It deals with the humanities of all ages, for the handicapped have been problems of all periods of national development. Different cultures have dealt with them differently. Social treatment as such apparently preceded educational procedures.

Three general periods are characteristic of the work with the handicapped, whether as a whole or by distinct areas, though in the latter case there may be individual variation in bracketing dates. These periods are approximately as follows:

1. PRIMITIVE AND ANCIENT TIMES, dating from about 1550 B.C. to about 476 A.D. (using the blind as an example). This period may be analyzed princi-

pally for its philosophy of social treatment of the handicapped as revealed through authentic records and accounts.

2. THE MIDDLE AGES, approximately 500–600 A.D. to around 1500 A.D. The interest of outstanding personalities, if roused at all, assumed a more philanthropic aspect, notably in the case of the blind. For both these earlier periods what history exists is confused and easily misinterpreted. The handicapped were more likely to be viewed as a whole — i.e., horizontally — rather than with emphasis upon any divisional areas, although the areas were known, recognized, and sometimes specially considered. For these reasons the story of the handicapped before 1400 A.D. is best presented as a unit. Where interesting and important exceptions have been found, such material is noted in the area to which it belongs.

3. THE MODERN PERIOD, after 1400–1500 A.D. In this period most of the real progress has been made in the care and education of the handicapped, beginning with basic scientific investigations which showed the way to crossing the baffling barriers to educational procedures.

PRIMITIVE AND ANCIENT TIMES

Probably, from man's earliest thinking moments, the handicapped have been recognized as a group of individuals needing treatment. There has always been, and it is still increasing, a trend toward recognizing them as a horizontal (taking all groups together) as well as a vertical (by areas) problem. In prehistoric

days, and among animals, nature herself eliminated the handicapped by the process of the survival of the fittest. As they were incapable of combating nature and equally unable to detect and adequately combat enemies, death came upon them rapidly.

As tribes developed from small family groups, a formal process of elimination was favored. The handicapped, owing to their inability to assume responsibility even for their own persons, slowed the movements of the roving tribe. They neither joined the hunt nor contributed to the meager production of food supplies. Thus they constituted an actual economic hazard to the entire group. In attack they were helpless; they depended upon the protection of their tribesmen. Their lives were constantly in danger from wild beasts and human foes. If they were deserted by the fleeing tribe, they were easily captured by the enemy and often became the victims of ceremonies, rites, and practices more cruel than death at the hands of their own associates. In some primitive tribes similar treatment is, even today, accorded the aged, for similar reasons.

Such a protective and possibly merciful practice continued with the ancient Greeks and Romans, though possibly it has not been chronicled accurately. Since the family was the social unit in these civilizations, the head of the family determined the fate of any handicapped child. The decision was based, in all probability, upon the degree and type of impairment, with emphasis upon social and economic prognosis. It is quite possible that society, even at that time, was unequipped for any form of treatment. The practice,

at any rate, was selective and gradually came into disuse when these nations turned from strictly warlike pursuits to become the centers of the culture of their times.

The reputed abandonment or destruction of the unfit cannot have been universal. It is claimed that these individuals were thrown into rivers, or left in the mountains to perish or to be destroyed by wild beasts. It is usually reported that imperfect children were exposed in Sparta under Lycurgus. It is stated that the Athenians put deaf children to death and that the Spartans consigned them to the great pit in Taygetus. In Athens exposure supposedly occurred under Solon and Plato. Aristotle is claimed by some to have approved. The laws of Lycurgus permitted abandonment of idiots. In Sparta a socially handicapped individual was not allowed to exist because he imperiled the lives of the group.

Nevertheless, many of these reputed practices do not tally with the proper ages of children for expected discovery of certain handicapping defects. It is hardly possible scientifically, even today, to determine whether a child at birth or in early infancy possesses or does not possess hearing. Mental handicaps, likewise, are often discovered late; even now many a parent claims that a baby, later proved to be of low mentality, was actually assumed to be very bright, though the statement may, it is true, be made on a defensive basis. On the other hand, blindness and crippling are obvious very early in life. Conceivably, early destruction may have been practiced in their cases. But it is not

known that the Spartans or other Greeks destroyed children two or three years of age.

In summary, discovery of a defect had to precede the elimination of the individual. Abandonment and similar practices had to be confined to infants whose defects could be found or the age for such destruction extended into young childhood. Again, in certain instances, it is known that various limitations were placed upon different types of the handicapped — the mentally handicapped, for example, being given no social rights. If destroyed, what need could there be for controlling practices? The obvious answer is that selective processes existed, though the method of selection is not always clear.

EARLY DESIRE FOR REMEDIAL MEASURES

That the practice of elimination was not satisfying, even though selective, is evident at a very early stage in the social conscience. There developed attempts at treatment by ceremony, by social practice, and by other means paralleling and available during the culture of the period. Treatment implied the employment of experts, and curious experts and methods they were.

Logically, as various remedial groups appeared in society, attempts were made to treat the various types of handicapped. This was true, whether the healers were medicine men, priests, or Asclepiads (those famous physician-priests of Epidaurus, third century B.C.). Quite probably some of the sadistic practices of the Middle Ages were actually offshoots of some unchronicled theories of treatment. Instead of medical diagnosis came classifications as *demon-possessed*,

accursed of the gods, or even protected by the gods. Superstitions arose around these explanations of the phenomena of deviation. Some have persisted over long periods. The witch hunts of Salem may have found their origin in this remote past. Touching a cripple's hump to insure good luck may be but a survival of medieval superstition. The explanation of such practices may not be known at present, but the source is old indeed.

Judging from ancient and primitive idols, the bizarre most of all were worshiped, possibly on the basis of fear and propitiation. The handicapped, if of high degree, were sufficiently bizarre to meet this standard. If of less degree they were, perhaps, accepted as reasonably normal members of society.

Both medicine and education of today are heritages from the religious, as from the primitive medicine man, the priest in Egypt, whose many skillful arts and sciences for the most part have been lost, the Babylonian groups, and the monk of the Middle Ages, caring for body and mind as one more means of saving the soul. The barber-surgeon and the physician-philosopher are a comparatively late development. The handicapped, from very early times, were obviously the wards of the religious. Yet neither the disciples of Aesculapius nor the followers of Christ, even in combination, came anywhere near solving their problems.

There is ample evidence that the treatment of the handicapped as a group or by areas might or might not follow or influence the culture of any world period. Hadrian, for example, mentions the blind as gainfully

employed in Egypt.⁶ Probably the other handicapped were accorded similar appropriate consideration.

The Chinese principle of family loyalty was to be extended to the more unfortunate members of the family. Parents must protect their children and children obey their parents, even at the expense of larger social loyalties. "Everyone calls his son his son," said Confucius, "whether he has talents or has not talents." In other words, the shortcomings of youth should be viewed charitably and judgment withheld until they grow up. The same philosophy applied to the physically handicapped.

The father of Confucius, Shuh-Liang-Heih, a military chieftain, practiced this philosophy even before the birth of Confucius. He was the father of ten children, nine girls and a *crippled son*. When he was nearly seventy years old, he decided that he wanted a "sound son"; so he sought a younger wife, only seventeen years of age. Confucius was born the following year. The crippled son also, with proper training, might have become a sage.

THE HEBRAIC LAW

The Hebraic laws concerning the unfortunate and dependent represent the high-water mark of prophetic thought and teaching. It is true that Hebrew law is unmethodical and unclassified, and reflects inconsistencies of thought and practice. Nevertheless it is in marked contrast with some of the harsh and pitiless practices of antiquity. The law recognizes the unfortunate, the handicapped, the needy, and the dependent. It admonishes the people to aid these helpless classes.

Widows and orphans, the blind, the deaf, and the needy are to have special consideration. (Exodus XXII, 21-24; Deuteronomy XXIV, 17, 18, and XXVII, 18; Leviticus XIX, 9, 10, 14, and XXIII, 22.)

Among the early Hebrews the Talmud and Midrash mention four infirmities: deafness, dumbness, blindness, and lameness — blindness being regarded as the most severe. Certain definite social limitations were placed upon the handicapped. These related to the laws of ceremonial uncleanness which excluded defective persons from sacred places. Jesus was condemned for healing a lame man in the synagogue on the Sabbath. These infirmities were considered as possibly outcomes of sin, though the Talmud and Midrash enjoined compassion and benevolence.

THE CODE OF HAMMURABI

Occasionally inspired social remedies are revealed; e.g., the modern practices of vocational guidance and workman's compensation laws are of ancient origin. That vocational guidance existed early is revealed from the Egyptians' use of the blind as professional mourners.

The principle of compensation for injuries dates back to the Code of Hammurabi. The Babylonian attitude toward the handicapped can, with some difficulty, be inferred through indirect references to the unfortunate in the Code of Hammurabi. The responsibility rested upon an involved family system in a civil code which is harsh and severe. The *lex talionis*, which prevailed throughout, recognized class

distinctions but demanded that injuries be requited in kind. Thus —

“If a man destroy the eye of another man (a patrician), they shall destroy his eye.”

“If he shall destroy the eye of a workingman or break a bone of a workingman, he shall pay one miva of silver.”

“If a slave deny his master, he shall cut off his ear.”

The basis of this code came from the quasi-scientific practice of medicine in Babylonia, where physicians were severely punished for bungling an operation. “If a physician operate on the eye socket of a man with his bronze lancet and destroy the man’s eye, they shall cut off his hand.” The same principles were applied to other forms of medical attention.

THE TIME OF CHRIST

With the coming of Christ came also a point of view of compassion and care for the poor, the lame, the blind, the demon-possessed, and the mentally afflicted. No attempt, however, was made to educate them, nor is it clear how far the teachings of Christ were actually practiced toward the handicapped in His day. Certainly He was criticized for aiding them on the Sabbath.

THE MIDDLE AGES

In the early Middle Ages there arose a curious contrast between the handling of the handicapped by the religious and by the nobility. To the religious they undoubtedly represented souls to be saved, provided a certain amount of extra effort were expended. The

nobles, on the other hand, used the handicapped, as had certain nations previously, for the purpose of amusement. Imbeciles continued to be the butts of jokes, though not having the shrewdness to create them. But there arose Merry Andrews and Grimaldis of great cleverness and influence — sometimes rachitic dwarfs, sometimes true dwarfs and cripples. These might have, in addition to their wit, a certain bizarre appearance amusing to their owners. Some have been immortalized even later in the ages, through literature, the drama, and song. Even today certain types of dwarfs are considered good raw material for circus clowns.

The keynote of the Middle Ages was cruelty and confusion. There is no reason to believe that the cause of the handicapped was much advanced during this period.

THE MODERN PERIOD

With the advent of the modern era innumerable important figures have appeared in the pageant of the handicapped. The keynote of the succeeding work has been the development of both the horizontal and the more international point of view. Modern science and the invention of means of faster communication made this possible. The compassion of Christ has been united with the latest discoveries of science for the good of the handicapped.

The gradual stepping into the lead by the United States has characterized the last century. The greatest developments have been in perfection of organization rather than in improvement of methods. At the mo-

ment the outstanding demand is for thoroughly trained teachers to carry on existing methods and for highly organized and far-seeing research to renew rapidly expending educational capital. The education of the handicapped has fallen far behind the medical advances for the same groups.

Chapter Two

THE VISUALLY HANDICAPPED

THE visually handicapped may be divided into three general groups: (1) the blind; (2) the partially-sighted; and (3) the partially-blind.

Educationally, the blind are the parent group. They have received care and training by means of definite and specialized methods developed through a long and fascinating historical period. Until very recently the partially-sighted have been primarily of medical interest. Educationally, they had been neglected until the advent of the modern special sight-saving or sight-conservation classes. Medically, the partially-sighted are a group whose vision is of sufficient limitation, for various reasons, to make hazardous the employment of the *sum total* of educational measures which are used for normally-seeing children. The partially-blind are an intermediate group with vision so low that a combination of methods is needed in their educational program. Their specialized care, as differing from that of the blind or the partially-seeing, is distinctly an emerging innovation and has been recently the subject of extensive educational and medical research. Experimental investigations indicate a better means of providing effective training for this group, though suggestive curricula are still tentative.

CARE AND EDUCATION OF THE BLIND

Slow indeed has been the progress of educational provisions for the visually handicapped. Either through

ignorance, fear, or prejudice, remedial or social provisions for the blind (until the present century the only group of the visually handicapped recognized educationally) were sporadic until comparatively recent times. Nevertheless, dotted through the records of the past are occasional individuals or groups, outstanding in their accomplishments and efforts in behalf of the visually handicapped. Some tried new ways of teaching the blind. Others interested themselves in the social welfare of the group. From such men of vision slowly evolved the present forward-looking and scientifically educational program for the visually handicapped — with emphasis, until recently, upon the needs of the blind, meeting thereby the most striking situation.

ANCIENT TIMES

The ancient period was characterized by three distinctive trends: (1) There were definite study of and treatment for diseases and abnormalities of the eye. Glasses were used in these early times, but they were of the pinhole type (used in China) or of globular precious stones (used by Nero). (2) The blind, if allowed to live, were educated and highly respected. In many nations they were gainfully employed. They were given rights and privileges, depending upon their needs and their value to society in various capacities. Hadrian tells that in Egypt, for example, they formed groups which served as professional mourners. (3) The social philosophies, although difficult to analyze, tended toward kindly treatment of the blind.

In addition to general practices, such as the exposure

of the handicapped in Greece, Rome, and Sparta, and their destruction, as with the Goths, certain specific high points stand out in the different nations as of importance in the treatment of the blind.

In Egypt, the blind were found in great numbers. It was called by Hesiod "the country of the blind." The Ebers Papyrus, dated 1553-1550 B.C. and discovered (1872) in the Necropolis of Thebes, contains the oldest known account of eye diseases. Later (560 B.C.) Herodotus records the fame of Egyptian oculists. This country seems to have been the only one of ancient times to have had trained specialists for the care of the eye. In the Greco-Egyptian kingdom special care was provided for blind veterans of wars.

In the Far East, China employed the blind as soothsayers and transmitters of oral tradition. In India, Buddha taught pity for the blind; and the Buddhist kings, especially Asoka, practiced charity, erecting hospitals for the care of the blind. The early Hindu medical books list seventy-six eye disorders.

In Greece, the treatment of blindness was a blending of Egyptian magic and Greco-Roman science. The Asclepiads (physician-priests of the third century B.C.), cured eye diseases by drugs and exorcism. The blind were sometimes honored as seers, prophets, and poets, among whom are the well-known Homer, the lesser-known Demodocus, and the prophets Tiresias and Phineus. Blindness later came to be looked upon as a curse of the gods. Euripides advised suicide for the blind. Eratosthenes, facing blindness at eighty years of age, starved himself to death. However, there were public pensions for the blind citizens of Athens, de-

cided upon by the Council of Five Hundred. Such grants consisted of a daily dole for necessities to those with few or no possessions.

In Rome, a blind child had rights to family membership when blindness was not discovered until after infancy. Often these blind children were trained as beggars or galley slaves, the beggars being exploited by slave masters.

Among the Hebrews there was an apparent attempt to treat the blind in a kindly manner, but not to permit them to accept impossible responsibility. Legal protection was a private obligation. The family was held responsible for the care of its blind, as there was no public care or education provided for them. Many took care of the grinding of the hand mill. The educated blind sometimes became private tutors or members of the group of learned scholars known as the Sanhedrin. The story of Tobit in the Apocrypha reveals the value of medical treatment in eye disease.

In early Christian communities, the blind were under the care of the deacons. They were admitted to the Agape (the social meal or love feast of the primitive Christians, usually accompanied by the Eucharist), or sheltered in houses of the well-to-do. The church fathers expressed special interest in all handicapped members. St. Jerome urged care for the poor, the weak, the lame, and the blind; Gregory of Nazianzus commended care for the blind; St. John Chrysostom, in his famous "Sermon on the Poor," urged solicitude for the blind; and St. Ambrose, in his "Address to Anaxentius," named the blind among those entitled to churchly care. Other churchmen founded the first

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The Visually Handicapped

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asylums and established the first hospitals for the handicapped.

THE MIDDLE AGES

With the advent of the Middle Ages religion had broken down national barriers in the care and treatment of the blind; indeed, the foundations for this were laid in the early Christian communities. The period was characterized by the attempts of church and state to aid the blind. Also certain efforts were made for self-help, through the free brotherhoods and trade guilds of the thirteenth and fourteenth centuries.

As religious and charitable organizations sprang into existence in many countries during the early Middle Ages, hospices designed for the care of the aged, the blind, and other handicapped were established in various centers. Private and state benefactions and endowments cared for some. In 1178 the Duke of Bavaria established a home for the blind in which some instructional attempts were made. Other hospitals were founded by free cities in the twelfth and thirteenth centuries.

Notable among these homes for the blind was the Hôtel des Quinze-Vingts, established at Paris in 1254 by Louis IX, as a refuge for the blinded Crusaders. One of the most important institutions in the history of the care of the blind, it was operated by a lay brotherhood, endowed by the French kings, and governed by the ruler of the order. It was favored by the Popes and for some time prospered, but eventually it was wrecked by Rohan, the Great Almoner of Louis XVI, who took the property and funds of the institu-

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tion. It survived—in fact, it still exists—and became an example for many other blind brotherhoods. Subsequently hospital brotherhoods patterned after that at Paris were founded at Chartres, Tournai, Strasbourg, Bruges, Ghent, Padua, Palermo, Swansea, and London. In Padua the brotherhood became the Congregation of Santa Maria dei Ciechi (1377). In Palermo (1661) the work was taken over by the Jesuits in 1690; the organization later became a public secular institution (1815). The blind brotherhood of Palermo was noted for its cultivation of music. There were also free brotherhoods of the blind, secular organizations patterned after the merchant and trade guilds, which flourished in the thirteenth and fourteenth centuries.

It is interesting to know that medieval poor-relief laws included the blind, as seen in ordinances of free cities—e.g., Frankfort, 1437; Cologne, 1450; Antwerp, 1458; Nuremburg, 1522; Strasbourg, 1523. In the new Ordinances of Ypres (1525), written by Juan Luis Vives, "On the Subvention of the Poor," Vives maintained that the blind must be given employment as a contribution toward their support. The English Poor Relief Law of 1601 included the blind, the crippled, the sick, and the aged.

THE MODERN PERIOD — INFLUENCE OF EMINENT BLIND PERSONS

By the close of the seventeenth century the blind had attained personal eminence from time to time. In many instances such persons were not only of general interest but frequently turned their attention toward

devices and methods for aiding in the education of those similarly afflicted.

Among those whose careers were important, but which did not involve attempts at education of the blind, was John Metcalf (born 1717), a skillful blind musician who saw service with the royal troops as a musician. He became a traveling salesman, contractor, and engineer. Maria Theresa von Paradis (born 1759), of Vienna, a talented blind musician, played before the Empress Maria Theresa and was pensioned by her. She toured Europe, visited Valentin Haüy at his school in Paris, and demonstrated the culture and refinement possible to the blind.

But the blind have seemed to turn instinctively toward aiding their own, and this has been true of those with outstanding personal careers in other fields of endeavor. Until Haüy's school,¹ it was the efforts of such individuals and groups that contributed in greatest measure to progress in making education available for the visual defectives.

EFFORTS WITH SPECIAL DEVICES (SIXTEENTH AND SEVENTEENTH CENTURIES)

Braille is a comparatively modern invention. Indeed, it was not until 1920 that a universal system was accepted. But that there was a need for special devices for teaching the blind was recognized early, and many were the resulting inventions, some of which are in use at the present time. They represent one of the most fascinating developments in the history of the care and education of the blind.

¹ See page 26.

Back in the fourth century Didymus of Alexandria, a blind theologian and Biblical scholar, carved an alphabet in wood and tired his "readers" out — whether mentally or digitally is not recorded. For his various contributions he was appointed to a professorship in the University of Alexandria.

Rampazetto (1575) in Rome taught with carved wooden letters. Francisco Lucas (1580) in Saragossa, Spain, also carved an alphabet on wooden tablets. George Harsdorffer (1651) in Nuremburg taught the blind to write with a stylus upon wax-covered tablets. Padre Francisco Lana Terzi (1670), in Brescia, Italy, used a kind of cipher code based upon a system of angles and points, and dots enclosed in squares and figures, thus hinting at later braille. Jacob Bernanolli (1676), Geneva, used wax or wooden tablets and invented a frame with a crosspiece to guide the hand of the blind writer. Pierre Moreau (middle seventeenth century), Paris, invented a system of movable letters cast in type some two hundred years after the actual invention of printing. Schonberger of Königsberg, late seventeenth century, preferred letters of tin.

A little later came Nicholas Saunderson (born 1682), the blind mathematician, who was appointed a professor at Cambridge and expounded the theories of Newton. He invented various mechanical devices for the blind, including the pegboard. Jacob of Netra in Hesse, who lived about the middle of the eighteenth century, invented a system of notched sticks as a means of communication and computation. Weissenburg (born 1756), in Mannheim, Germany, learned reading, writing, mathematics, geography, and physics. He was

the first to use relief maps for teaching blind children. His methods and the success of his teaching also influenced Haüy.

Thus did some of the devices used even today in the education of the blind have their early origin. Later developments of this interesting aspect of work with the blind will be considered at appropriate points in subsequent sections.

OTHER INFLUENCES IN THE EDUCATIONAL PROGRAM

The influence of the writings of certain philosophers, physicians, scholars, and statesmen who became interested in the education of the handicapped has been felt throughout the years. Among these may be noted Geronimo Cardano,¹ physician of Italy in the sixteenth century, who was interested in the instruction of the deaf and blind, and Blind Peter Pontanus, a Fleming, who published a book urging instruction of the blind.

In 1646 appeared in Italy *Il Ciaco Afflito e Consolato*, in France called *L'Aveugle Afflige et Console*; in the early eighteenth century the Royal Society of London published a report from the Ophthalmic Infirmary entitled *Views on the Prevention and Causes of Blindness*.

In Locke's *Essay on the Human Understanding*, the author sets forth the so-called problem of Molyneux: "Given a man born blind, let him learn by touch alone the form of a cube and sphere. After he has attained maturity, grant him suddenly requisition of sight, as though an operation for congenital cataract, will he be able through sight alone, without reference to his touch experience, to distinguish the forms of a

¹ See page 53.

cube and a sphere?" Locke's contention is that he would not be able to do so. Bishop Berkeley continued the discussions of this problem in his *Essay toward a New Theory of Vision* (1709).

While Leibnitz in Germany discussed the mental abilities of the blind, Condillac in France treated the effects of blindness on perception in his *Traité des Sensations* and his *Essai sur l'Origine des Connaissances Humaines*. Denis Diderot, desiring to test the theories of Locke and Saunderson, wrote his *Essai sur les Aveugles* (1798). This latter book anticipates modern ideas in that it allows for no compensation of the senses. It builds education on what the blind have, rather than on what they have not.

Condillac, Rousseau, and Abbé Deschamps aroused public sympathy both for the blind and the deaf through their writings. L'Abbé de l'Épée, however, actually taught the deaf and inspired Valentin Haüy to inaugurate his great school.

VALENTIN HAÜY (1745-1822) AND HIS SCHOOL

With the French Revolution came a definite recognition of social responsibility for the handicapped. Valentin Haüy became the outstanding figure in the movement for the education of the blind. Haüy not only was the leader in France, but later extended his influence throughout other parts of Europe. As has been stated, part of his inspiration came from l'Abbé de l'Épée, teacher of the deaf and a pioneer in the instruction of lip reading. As recognition was accorded de l'Épée and Haüy, other countries followed the leaders and established educational programs for

the training of the blind and the deaf. The progress of the work in England and Scotland was practically parallel to the movement in France.

The story of Haüy is amazing. Born November 13, 1745, and educated by Remonstrant monks, he became a student of languages and earned his living as a government clerk. He was a contemporary of Diderot, Voltaire, Rousseau, Turgot, Necker, Mirabeau, and Napoleon. His brother was a scholar and a leader in scientific and literary circles composed of outstanding men of action and of vision. Quite naturally both brothers shared in the cultural activities of this group of men and were definitely stimulated by their philosophies.

From a modest beginning, Haüy's school prospered as more and more persons of influence became interested in it. The Constituent Assembly provided a permanent home for it and appointed Haüy first administrator for the handicapped. Under Louis XVI it was patronized by royalty and eventually sanctioned by the Royal Academy. The Constitution of 1793 maintained that it was "the holy duty of the state" to care for the poor and unfortunate.

Political unrest was beginning to foment in Paris, and revolutionary activities were incited in many quarters of the city. The blind engaged in some of these, and naturally propaganda was spread in the school. During this time of turmoil Haüy was arrested and held on suspicion. Later, under Napoleon, Haüy incurred the disfavor of the Emperor because of his membership in a forbidden society, and he was dismissed from his post. Without his leadership the

school lost prestige. Later it was united with the Quinze-Vingts.

Of Haüy's writings, the most famous is his *Essai sur l'Education des Aveugles*, in which he describes methods used in teaching arithmetic, geography, music, reading and writing, the trades, and handicrafts. The chief fallacies of the *Essai* are that Haüy assumed that methods of teaching the blind are synonymous with teaching the seeing; he believed that touch became an adequate substitute for sight. He advocated and emphasized a narrow and traditional literary curriculum, together with musical and vocational training. Among his contributions to the education of the blind was his invention of embossed printing.

During Haüy's last days he became head of the *Musée des Aveugles* and helped start schools for the blind in Berlin and St. Petersburg. He died in 1822.

OTHER SCHOOLS FOR THE BLIND (EIGHTEENTH AND NINETEENTH CENTURIES)

The first school for the blind in England was founded in Liverpool (1790). Its object was "to render the blind happy in themselves and useful to society." In Edinburgh, the Blind Asylum was opened in 1793, and in that same year the Bristol Asylum and Industrial School was established. The Southwark School for Indigent Blind (1799), the National Institution of Dublin (1810), and the Royal Normal College, London, headed by Sir Francis Campbell, were then established.

The English idea of blind school education shows no distinction between charity and education, the asylum

idea remaining uppermost. The only exception was the Bristol school, whose aim was "to teach them (the blind) a means of getting a living by work." Sir Francis Campbell, who was in charge of the Royal Normal College in London, overemphasized the place of musical education in the curriculum for the blind.

The Vienna Institute for the Instruction of the Blind, the first school in Austria, was founded by Johann Wilhelm Klein in 1804 and reflected the influence of Maria von Paradis. His institution was a school, not an asylum. In 1816 it was made a royal institution under the patronage of Franz I. Among Klein's writings are: *A Description of an Attempt to Educate Blind Children for Useful Citizenship*, *a Teacher's Manual for the Education of the Blind*, and *Institutions for the Blind in Germany*.

Klein contributed a truly educational point of view to the methodology of teaching the blind. He introduced a new psychological approach and brought about a realization of economic conditions of the blind.

In Berlin, in 1816, a school was established by King Frederick William III. It was patterned after Haüy's school, which the king had visited. August Zeune, head of the school, experimented with a type filled with pin points with which Roman letters were outlined.

SCHOOLS FOR THE BLIND IN THE UNITED STATES

In the United States there were simultaneous efforts in establishing schools for the blind in Boston, New York, and Philadelphia. Their history is almost iden-

tical. All had dynamic personal leadership and went through a similar period of experimentation before they became established. Little by little, aims and objectives were stabilized and conservative and steady advancement was made.

NEW YORK INSTITUTION FOR THE BLIND

The New York Institution for the Blind was the first of these early schools. Samuel Wood, a Quaker, becoming interested in blind children in a city almshouse (1827), was successful in arousing public sentiment for the blind. The school, incorporated in 1831 and opened March 15, 1832, was the direct outcome of this effort. Samuel Ackerly was the first president of the board of managers, and John D. Russ the first principal. The site of the school from 1837 to 1924 was the New York estate of James Boorman, but state appropriations began in 1834. In 1912 the New York Institution for the Blind became the New York Institute for the Education of the Blind, which in 1924 moved to its present site on Pelham Parkway.

It was during his long service as principal of the New York Institution that William B. Wait invented New York Point in 1868, the Kleidograph in 1894, and his system of braille music notation in 1872. In 1871, the first convention of the American Association of Instructors of the Blind was held at the New York Institution. It was, however, at the second convention of the Association held the following year that New York Point was adopted. Six years later, in 1878, the system of music notation invented by Dr. Wait was also adopted by the A.A.I.B.

SAMUEL GRIDLEY HOWE AND THE PERKINS INSTITUTION

Perkins Institution and Massachusetts School for the Blind was incorporated in 1829. Colonel Perkins had donated his town house and grounds as a site for the school, and other New England states had appropriated funds. In 1830 the Massachusetts legislature made the first state appropriation for the school. The first director, Samuel Gridley Howe, was a doctor, a surgeon, and a soldier, sympathizing with and aiding the Greeks in their revolution. In 1831 Dr. Howe visited the schools for the blind in Edinburgh, Paris, and Berlin. He went blindfolded for days to discover how the blind felt. Although he brought many embossed books from Europe and used them at Perkins, he invented the Boston Line Type.

Dr. Howe had decided and advanced views concerning the blind and their education. He contended that the blind as a class have less physical and mental health than persons with normal vision and that they, as well as all defectives, should be diffused and kept diffused. He prophesied that the time would come when all blind children would be sent to public schools. Dr. Howe's greatest educational innovation was the cottage system.

Howe, best known as a leader in work with the blind, is actually one of the most dramatic and inspirational characters in the whole history of the education of the handicapped. He was engaged in all types of social service work. He labored to improve conditions for the care of the insane; he advocated school reforms, prison reform, and more adequate training for deaf-

muters and the feeble-minded. He was active, also, in the movement for the abolition of slavery. His associates were national leaders of his day, including John Quincy Adams, Daniel Webster, Charles Sumner, Theodore Parker, Horace Mann, and the naturalist, Agassiz.

He fought and won the first battle in behalf of the insane in this country and was active in establishing the first state hospital for the insane in Massachusetts.

Howe was equally interested in prisons and prison reform. He was the moving spirit in the Prison Discipline Society and the Prisoners Aid Society. In opposing the reform-school idea, he said that "Viciously disposed youth should not be brought together but put far asunder." Consequently, the school for girls, which he proposed to the State Board of Charities, was to be organized on the family plan.

With regard to his work and reports to the Massachusetts State Board of Charities, his friend and co-worker, Mr. F. B. Sanborn, said: "No such mind has before been steadily directed upon the problems of charity and social legislation in New England. He came to the questions of juvenile reform, prison discipline, the care of the insane, and the general disposal of the dependent classes with a piercing analysis which delighted men of thought, while it startled and displeased the children of tradition and routine."

Concerning his work for the establishment of the Massachusetts School for the Feeble-Minded in 1846, Walter E. Fernald writes: "I consider that his work with the imbecile is truly the chief jewel in his (Howe's) crown. The other things he did, other men might have done; but he alone among the philanthro-

pists of that time was able to see the need for this work and to realize its possibilities."

With his friend, Horace Mann, he visited schools for the deaf in Europe and became convinced of the practicability of teaching them speech. The campaign which he and Horace Mann began was opposed by the Hartford School, but Horace Mann and Howe established the class for teaching deaf mutes by the oral method which led to the founding of the Clarke School at Northampton.

Howe joined Mann in the Common School Controversy. Horace Mann became secretary of the Massachusetts Board of Education in 1837, which was the same year that Howe took Laura Bridgman, the blind-deaf child, into Perkins Institution. Dr. Howe's daughter says: "As in the fight for articulation, so in that for education, my father and Mr. Mann worked together, sharing the toil and obloquy, giving and seeking aid and counsel. The correspondence between the two is a series of lightning flashes."

The second director of Perkins Institution, Michael Anagnos, had come with Dr. Howe from Greece and shared with him similar ideals of social reform. He became a great organizer and money raiser. He particularly opposed the title "asylum" as applied to institutions for the handicapped. He started the Howe Memorial Press fund and the Anagnos library for the blind. Helen Keller became a pupil of the school under his direction. He extended work for the deaf-blind and established a kindergarten wherein Froebelianism, as taught by Emilie Poulsson, was applied to the education of blind children.

During this period home teaching was begun under the direction of Perkins Institution. Anagnos believed that blind persons should have a minimum association with the blind and a maximum association with the sighted.

The third director was Edward E. Allen. Dr. Allen inaugurated a re-housing program, introduced a program of mental and educational testing, more thorough separation of the semi-sighted, and broader educational objectives.

Dr. Allen held that the mission of Perkins was to teach the art of living. His defined purpose of education was less to make scholars than to build noble men and women.

STATE SCHOOLS

After New York and Perkins, many states established schools. The Pennsylvania Institution for the Instruction of the Blind (1833) was the third of its kind in the United States. It was founded by the Society of Friends and the American Philosophical Society and later received legislative appropriations. Dr. Julius R. Friedlander was the first principal.

Ohio (1837) was the fourth state to establish a state school for the blind. Other schools, some of which began under private auspices, soon came under the control of the separate states. Among these were: Virginia, 1848; Wisconsin, 1849; Indiana, 1847; Illinois; 1848; Missouri, 1850; Georgia, 1851; Iowa, 1852; Maryland, 1853; South Carolina, 1855; and Texas, 1856.

Schools for the blind, which by the middle of the nineteenth century were to be found in 19 states, in-

creased in numbers during the following decades. By 1875 they were established in 29 states.

By 1930 there were 58 residential schools for the blind in the United States — 11 privately controlled and 47 under some form of state control. Of the 5530 pupils reported in 1930, 2812 were partially — i.e., potentially — blind and the rest totally blind.

It is interesting to note that in 1930 day classes for the visually handicapped in city school systems reported 5308 enrolled in 409 classes in 118 cities in 22 states. The movement for classes for the blind in the public schools began when Frank H. Hall secured the establishment of such a class in Chicago (1900). Many years previously (1851) Samuel Gridley Howe had urged the social advantages of such a movement. Public school classes for the blind now exist in 15 cities, with 6 others having made legal provision for their establishment.

MODERN PROGRESS IN THE EDUCATION OF THE BLIND

The education of the blind was retarded for many years by the lack of a uniform system of braille. For many years what was known as the "type war" was waged by the advocates of different systems, such as the New York Point and American Braille. It was not until 1920 that the Uniform Type Committee succeeded in securing acceptance of a universal braille system.

The American Printing House for the Blind, which supplies braille books, embossed maps, and other teach-

ing apparatus, was established in 1858. At first it was supported by private subscriptions. In 1876 Congress voted it a thirty-year annual income of \$10,000. This amount has been increased, until in 1938 it amounted to \$125,000.

In 1853 the American Association of Instructors of the Blind was founded, but it did not hold another meeting until 1871. Since 1872 the Association has met biennially. Its various sections and committees coöperate toward the solution of problems of the education of the blind.

The American Foundation for the Blind was established in 1921. In addition to promoting legislation in behalf of the blind, this organization has been active in increasing the efficiency of educational work through research and publicity. The Department of Special Studies sponsored by the Foundation (1927-1933) has made notable contributions to research studies in educational methodology.

Perhaps the first instrument of modern education to be introduced was the intelligence test. As early as 1914 Robert B. Irwin began the adaptation of the Binet test for the blind. In 1916 Dr. Samuel P. Hayes continued the work by standardizing Terman's revision of the Binet Scales for blind pupils. In 1923 and 1930, after extensive use, especially in the Eastern schools, other revisions were published. Dr. Hayes was also influential in securing the use of educational achievement tests in schools for the blind. By 1921 such tests had been used in ten schools. At the present time a number of such tests are available in braille, but their use is limited to a few schools.

Schools for the blind are now beginning to break away from the spell of the dominant leaders of 1890 and to be looking toward the future with greater readiness to adapt the best present-day practices in public school education.

Through the association of schools for the blind with teachers' colleges — Perkins Institute with Harvard, the New York Institute with Teachers College, Columbia University, Overbrook with Temple University, North Carolina state school with Duke University, the Ohio school with the Ohio State University, the California school with the University of California — steady progress in teacher training and educational methods may be expected.

CARE AND EDUCATION OF THE PARTIALLY-SEEING

In considering the history of conservation-of-vision programs, of which the modern sight-saving class is a part, the wonder is not that such work exists at present but that it was so long delayed in crystallizing. The basic elements of the work are centuries old.

The study and treatment of diseases of the eye found its earliest development among the Egyptians and the Hindus. The hygiene of the eyes dates back at least as far as the practices of the monks of the Middle Ages, whose reading and writing stands were set at the now-recommended working angle of about 45 degrees with the floor line. Their standards of the positions of illumination were similar to our present ones, although they did not have the means of obtaining, indoors, either adequate amount or quality. Perhaps their de-

vices were considered more from the point of view of comfort than for the science of seeing.

The popularity of angled reading stands persisted, appearing in examples of old furniture. Around 1900 came a large number of patents for variations of the idea. At present, adaptations and modifications of the reading stand vary, from portable pocket racks to school seatings of more or less complicated mechanism. Most recently attention has been given to the triple relationship of the position of the work, illumination, and good body mechanics.

THE STUDIES OF VON GAHEIS

As early as 1802 Franz von Gaheis in Austria recognized that partially-seeing children should not and could not be educated in classes with the blind. Otherwise they tend to follow the personality traits and peculiarities of the blind rather than attempt to fit themselves to the pattern of normally seeing children. They become the "eyes of the blind," the latter placing too much dependence upon them and thus robbing the blind of an independence of action now well taught and highly desirable. They are likely to become the ~~problem~~ children in classes for the blind, at times even acquiring a superiority complex. They become unfitted also for competition with the seeing world. In sight-conservation classes the program makes it possible to avoid these unnecessary misfortunes.

SIGHT CONSERVATION AND MEDICAL SCIENCE

Perhaps the real turning point toward the conservation of vision was the result of the work of Carl Sieg-

mund Franz Crede (1819-1892) of Berlin and Leipzig. Crede was a famous obstetrician who introduced, in 1884, the prevention of infantile (gonorrheal) conjunctivitis (sore eyes), by the instillation of silver nitrate solution into the eyes of the newborn. In the United States this treatment is now a statute requirement. The physical theory of vision was known about 1600, although crude spectacles had been introduced two centuries previously. Such glasses were heavy and unsightly. They contained convex lenses and sold at a high price. Ophthalmology was placed on a scientific basis by Helmholtz, Albrecht von Graefe, and Donders.

Hermann von Helmholtz (1821-1894), a Prussian army surgeon, who subsequently held chairs in the basic sciences at several German universities, invented (1851) the ophthalmoscope. The next year he invented the phakoscope and the ophthalmometer, thus making possible accurate study of the mechanism of accommodation, particularly the part played by the lens. Albrecht von Graefe (1828-1870) of Berlin was the creator of modern eye surgery and made outstanding studies of the eye muscles and certain eye conditions. ~~Franc~~ Cornelius Donders (1818-1889) of Tilburg, Holland, provided the first important source of knowledge of the improvement of disorders of vision by spectacles and made a remarkable contribution to physiological optics in his *The Anomalies of Refraction and Accommodation* (1864). From such beginnings came the modern refractions, which have reached their greatest perfection on this continent.

In 1879, in England, under the leadership of Dr. Ralph Dudgeon the Society for the Prevention of Blindness was founded. Early in the twentieth century was formed the New York State Commission on the Prevention of Blindness, under Governor Hughes. Mrs. Winifred Hathaway and Miss Edith Holt conducted a survey, reporting in 1906. The same year was founded the American Conservation of Vision Association, which in 1915 became the National Society for the Prevention of Blindness. Its program included the training of teachers for sight-saving classes, although this work is now mostly in the hands of teacher-training institutions, sometimes as part of coördinated programs for training all types of personnel for the education of the handicapped, amid rich university resources. In 1907 the first social worker for eye patients was employed at the Massachusetts Charitable Eye and Ear Infirmary. In June, 1930, the Committee of Medical Social Eye Workers was organized, meeting with the National Conference of Social Work.

EDUCATIONAL INTEREST IN SIGHT CONSERVATION

The development of knowledge of the visual impairments of the eye led to the discovery of the damage being done to the eyes of school children. Much credit for combating this evil should be attributed to Hermann Cohn (1838-1906), a pioneer in the examination of the eyes of school children, and to Hermann Schmidt-Rimpler (1888-1915), as part of the new era of experimental hygiene. Rudolph Virchow (1869) originated the modern movement for the hygiene and medical inspection of school children.

Cohn's findings were confirmed elsewhere in Europe and on this continent. The phenomenon observed by him — namely, that increasing numbers of defects of vision occur with each year in the program of education — persists to the present time. Some take the point of view that, if a child can be refracted to approximately normal vision, he is no longer to be considered among the visually defective. This contention, however, remains a disputed theory.

Ever since Cohn's time, continuous attempts have been made to improve the situation. Notably these have been accomplished through improved physical surroundings, through modification of methods of printing textbooks, and through better methods of study. To date, possibly because of the continually increasing demands made upon eyes as our educational programs become more ambitious, no change seems to have been made in the statistical evidence of damage. Science has, apparently, merely held the situation in statu quo, with the exception of the sight-saving classes, where the methods apparently produced results. However, these methods have not spread too widely into the classrooms for the normally seeing.

PREVENTIVE MEASURES

In addition to the medical and educational interest and contribution to the hygiene of the eye and the conservation of vision, a third factor has come into the picture. Revelation discloses that accidents of an unnecessary nature, at play or in other life activities, are a frequent cause of blindness or damaged vision. Accordingly a safety movement has been under way for

the past few years. There has been introduced a variety of safety measures: goggles for protection against small or large flying foreign bodies (in manufacturing processes), legislation against dangerous toys and amusements, and education of the public and the school child in preventive measures.

SIGHT-SAVING OR SIGHT-CONSERVATION CLASSES

In spite of this program, cases exist which require special educational programs. For them the sight-saving or sight-conservation class was established.

Mechanically, the sight-saving program accomplishes two things: (1) it takes the strain off the vision; and (2) it develops the desirable habit of using other senses to an increasing degree to make up for the visual impairment.

At the beginning of the twentieth century the problem of educating the semi-blind or partially-sighted child began to engage the interest of medical and educational authorities in England and Germany. The London County Council established what were probably the first "classes for myopes." Dr. N. Bishop Harman, an ophthalmologist to the London County Council, and Dr. James Kerr, school medical officer for London, gave the impetus to the organization of special education for partially-sighted children.

In America the education of partially-sighted children began about 1909, when Robert B. Irwin opened a class for the blind in the Cleveland, Ohio, public schools. A year later he enrolled two children with defective vision. At first the same methods were used for these children as for the blind. However, these

procedures did not prove satisfactory, for the children used their eyes instead of their fingers.

Mr. Irwin divided the group into a class for the blind and a class for the visually defective. For the second group he worked out a plan which included equipment suited for these children. From time to time he found it necessary to change the methods of teaching and the equipment for the partially-sighted children. For instance, in the case of blind children it had not then been thought necessary to consider the lighting of the room. However, in the case of the partially-sighted children a maximum amount of light was needed, while at the same time it was necessary to avoid glare.

Finally, in the fall of 1913 the two groups were separated entirely. Also, at this time, the class which had been opened at the Waverley School was supplied with books printed in 36-point type. At all times the children were under close medical observation.

The sight-conservation classes in Cleveland were of the non-segregated, coöperative type.

Boston, Massachusetts, was another pioneer city in making special provision for partially-sighted children. Due to the efforts of the Massachusetts Commission for the Blind, the local school authorities, and a group of Boston eye specialists, classes for partially-sighted children were opened April 3, 1913, at the Thornton Street School. Edward E. Allen, director of the Perkins Institute for the Blind, is credited with having taken the initiative in this movement.

Two classes were subsequently established in the school in Roxbury, a section of Boston. Twenty-two

children were enrolled in this first class, under the direction of two teachers from the Perkins Institute for the Blind. These were segregated classes meeting in an office building.

Sight-saving classes were opened in Jersey City and Newark, New Jersey, soon after. In 1913 Newark provided two special teachers for its class of ten.

Cincinnati, Ohio, under Robert B. Irwin's supervision, opened a class for partially-sighted children in 1914.

Detroit, Michigan, acting under the recommendation of its superintendent of schools, established its first class for partially-sighted children in 1915.

By 1916, New York City had two special classes in operation.

In September, 1932, there were in the United States 410 sight-saving classes in 22 states and 118 cities, serving less than 5000 pupils. In April, 1938, there were 571 sight-saving classes, serving less than 7500. Most of these classes are devised to meet the needs of city children; little has been done in rural areas.

Thus it may be seen that growth and progress in establishing sight-conservation classes, while slow, has been steady and continuous. Historically these classes are still in the experimental stage, with much still to be accomplished and many unsolved problems remaining. Scientific and research studies are needed to indicate the direction of future growth. Means should be found to extend equal facilities to the rural child and to help him make his social and educational adjustment in his less complex world.

Chapter Three

THE HYPACUSIC

THE term *hypacusic* is a generic name for all the acoustically handicapped, including both the deaf and the deafened or hard-of-hearing. While both these groups, in terms of hearing alone, actually represent different degrees of loss of hearing, another difference of importance educationally appears. The deaf were either born without hearing or lost hearing before the advent of speech. They therefore lack memory of speech and speech patterns. These latter the hard-of-hearing possess.

As in the case of the visually handicapped, the history of the care and education of the hypacusic is dominated almost until the present by attempts to meet the problems of the major defectives of the group. The double disability (lack of hearing and lack of speech) created a series of confusions and problems which, even today, are recognized as the most difficult in the education of the handicapped with the exception of the barriers existing in the deaf-blind. Over the screen pass men at their best and worst — scientists, charlatans, workers of miracles, philosophers dominating medical fact, the romance and neglect of lip reading, codes, the development of schools, the battle between oral and manual methods, and finally, in 1902, the definite recognition and attempts to meet the needs of the hard-of-hearing.

CARE AND EDUCATION OF THE DEAF
IN EARLY TIMES

For centuries the deaf were actually considered as having two separate and distinct defects. Their lack of speech was thought to be an ailment *per se*. Never was speech recognized as a dormant power unused because it remained undeveloped. A second confusion arose in connection with the philosopher Aristotle, discussed presently.

It is believed that the early history of the deaf was an unhappy one, though the first reference to the deaf appears in Greek history in Herodotus in the fifth century before Christ, who mentions the deaf son of Cræsus.

The famous physician Hippocrates (460-370 B.C.), with characteristic keenness, realized that in deafness the dumbness was due to loss of the use of the organs of speech and not to stupidity. Aristotle, writing a century later, stated: "Those born deaf all become speechless. They have a voice but are destitute of speech." Of the ear, he added that it was the "organ of instruction" and that "of all the senses hearing contributes most to intelligence and knowledge," a belief stressed by modern proponents of the radio.

Just what Aristotle actually meant will probably never be known. A confusion arose over the meaning of the word "speechless," which in Greek contained the additional meaning of "senseless" or "lacking sensation." Thus the modern implications of the word "dumb," meaning "speechless," but more often

"stupid," had their beginnings in far-distant times. In the case of Aristotle's pronouncements, the great philosopher was interpreted as believing the deaf ineducable. He was held to have regarded the deaf as destitute of reason. This thesis, whether the result of a correct interpretation or not, was probably an important factor in the failure for many centuries to try to educate the deaf. For Aristotle's philosophies became those of the Church. While the Justinian Code, the Talmud, and the early Christian Church all proposed sounder views, it took Cardan to discover the errors in the dicta attributed to the philosopher. With the eighteenth century came the beginning of definite organized education of the deaf.

Considering the picture in greater detail, undoubtedly the ancient world followed the couplet of Lucretius:

"To instruct the deaf, no art could ever reach.
No care improve, and no wisdom teach."

THE ROMAN LAW

Under the early Roman law the deaf were classed as incapable, along with the madman and the infant. "Tutors" or curators (legal guardians) were appointed for them because they were held unable to perform without assistance any legal acts in their own behalf.

There was, however, one interesting distinction. In the case of the adventitiously deaf, or the deaf person giving evidence of intelligence, no curator was required. This was especially practiced if the adventitiously deaf retained their speech, or knew how to write. *The hard-of-hearing, accordingly, were early recognized, ac-*

cording to the modern definition, as having lost their hearing *after the advent of speech*. In the days of the republic and of the early empire, the apparent intelligence of the hypacusic person determined his legal capacity.

THE JUSTINIAN PANDECTS

In the sixth century great jurists were commissioned by the Emperor Justinian ¹ to prepare the code which bears his name. The deaf, including definitely recognized hard-of-hearing groups, were divided into five categories: (1) The deaf-and-dumb by nature. These were placed under curators, as they were considered lacking in intelligence to direct their own affairs. Nor could they make wills, manumit, contract, or act as witnesses, since these legal actions were dependent upon fine verbal distinctions. (2) The deaf-and-dumb by accident or disease, an "adventitious" group. If these persons had acquired a knowledge of language, they could exercise all the above rights by writing. *The deaf-and-dumb could also marry*. (3) The deaf from birth who were not dumb. Since they had voice, they ~~could~~ perform any of the acts mentioned above. This, parenthetically, ought to carry some implication of the results of a kind of individual program of instruction in speech. (4) The deaf, not from birth, but by accident. These included a true group of the present hard-of-hearing. They were not restricted by law from normal participation in affairs of everyday life. (5) The dumb who were not deaf. It is not clear why they

¹ See pages 47 and 51.

would be included in a code for the hypacusic. They had, if educated, full legal rights.

The Code of Justinian became the basis of later Latin law, both at Rome and in its provinces and in the later Latin nations that evolved.

THE HEBRAIC LAW

The Hebraic law made few direct references to the deaf. There was, it is true, an injunction not to "curse" the deaf. In the Talmud the deaf and dumb were placed on the same footing as "fools and children." They were not responsible for their actions and so were exempt from the provisions of the rabbinical law. Yet the Talmud also stated that the deaf could be taught; that they were not to be regarded as idiots (a seeming contradiction as compared with the statement of the previous sentence). Rabbi Jochanan had two deaf sons who learned from his lips.

PHILOSOPHY OF THE EARLY CHRISTIAN CHURCH

The Christian Church had within itself the means of socializing the deaf, perhaps from a very early period. A number of the monastic orders, under vow of silence, possessed systems of communication which varied from involved manual alphabets to gesture languages. It is not clear why these were not taught to the deaf for many years. Perhaps it was due to the philosophy that the deaf were uneducable. On the other hand, the monks may not have recognized the value of these means of communication. The same might be true also for lip reading, which is a natural adjunct used even by the normally hearing.

There are, of course, classic examples in the Gospels and subsequent scriptural literature concerning miracles where the deaf were made to hear and the dumb to speak. However, in general, the early Christian Church would not admit the capacity of the deaf for instruction.

The deaf could marry by signs, for the ceremony itself was a ritual performed for them by the Church. But in the Middle Ages neither the deaf nor the dumb were allowed to celebrate the Mass, the implication being that the words of consecration of the Eucharist must be *pronounced* for the transubstantiation to be effective.

Two points of view are presented in regard to St. Augustine's statements regarding the deaf. In discussing with Julian the doctrine of original sin, he wrote: "For what fault is so great innocence sometimes born blind and sometimes deaf? A defect, moreover, which is a hindrance to faith itself, according to the Apostle, who says, 'So then faith cometh by hearing.'" Many writers have interpreted this statement to mean that, lacking hearing, the deaf were outside the pale of faith, hence were to be denied salvation — a serious matter in an age where salvation was one of the most important objectives in life. The studies of Fay, however, reveal a statement from the same religious leader, "For what does it matter whether he (the deaf person) speaks or makes gestures, since both these pertain to the soul?"¹

¹ Fay, E. A., "What Did St. Augustine Say?" *Annals of the Deaf*, January, 1912.

TREATMENT IN THE MIDDLE AGES

The feudal law of the Middle Ages followed the Justinian Code closely. The deaf were not permitted to enjoy fiefs and other feudal privileges. The general limitations followed the Justinian principle that the closer to congenital deafness, the greater the restrictions. Thus the hard-of-hearing were granted the greatest legal privileges, because they were the farthest removed from the other end of the hypacusic scale.

In brief, the work with the deaf in the Middle Ages was characterized by care by the Church. No attempt was made to educate them, for, as has been noted previously, they were considered incapable of being educated. Indeed, in a history of England by Matthew Paris (1235-1273), it is related that when King Henry III's daughter, Catherine, died at the age of four, there was written that she "was dumb, and fit for nothing, though possessing great beauty."

EXAMPLES OF OUTSTANDING PERSONAL ACCOMPLISHMENTS

There is evidence, in spite of the uncompromising philosophy underlying the treatment of the deaf to this point, that families and possibly certain patrons recognized and developed outstanding ability in certain of the deaf.

Pliny (23-79 A.D.) in his *Natural History* tells of Q. Pedius, grandson of the consul of the same name, who was named as Cæsar's co-heir with Augustus. "This young man, being a mute from birth, the orator Messala, of whose family he was, thought that he might be instructed in painting, of which also Augustus of sacred

memory approved. The young man made great proficiency in that art."

The Spanish Titian, Juan Fernandez Navarette (*El Mudo*), 1526, of noble birth, was educated as a painter. He attained great celebrity and won the special favor of King Philip II. He was noted for his bold, confident work, executed in feeling color. He painted portraits of members of the court and of many religious subjects. He read extensively and wrote fluently.

A noted deaf poet was Pierre de Ronsard, born in France in 1524. He was hard-of-hearing, a soldier and a courtier, and became master of the charming verse which delighted the royalty of his time. It should be stressed, in considering his wide range of social accomplishments, that he was hard-of-hearing, not deaf.

Deaf painters and artists have achieved works of note and have been accorded high rank among the artists of their time in Spain, France, Italy, Germany, Holland, and the United States. There is, of course, no reason why things of beauty should not come from the "world of silence."

The change from the point of view that the deaf were ineducable came as a result of definite instructional experiments beginning about 1500 A.D.

EARLY LIP READING AND ITS INFLUENCE

Lip reading, however, was known previous to this period. The Venerable Bede, a pupil of St. John of Beverley, records that in the year 685, his master, then Bishop of Hexham, made a dumb boy to speak and read the lips. This was regarded as a miracle. St. John is the patron saint of the deaf in the Church of

England and pilgrimages are made every May to the beautiful Gothic minster in Yorkshire bearing his name.

One of the English Henrys sent Alcock, Bishop of Ely, to Spain as his ambassador. He was a great admirer of the writings of the Venerable Bede; so he carried with him a volume of Bede's work and is supposed to have presented it to the library of the monastery of San Salvador, at Ona, Spain. In 1584 a Spanish Benedictine monk, Pedro Ponce de Leon (of whom more later), read this book and was inspired to begin a career as a teacher of lip reading.

Rodolph Agricola (1443-1485) of Holland, one of the distinguished scholars of his time, was the first to record that a deaf-mute had learned to *write*. Without detail as to name or place, he states that he "saw what seemed to him to rise almost to the miraculous — a man deaf from his earliest years and consequently mute, who nevertheless had so learned that he understood whatever another wrote, and himself also, even as any other that can speak, whatsoever was in his mind he could perfectly express by writing."

Yet the shadow of Aristotle still lay over the education of the deaf. One hundred years later a learned Spaniard, Ludovic Vives, questioned the statement of Agricola on the ground that Aristotle had written that "living things who are deprived of hearing are not capable of education."

THE PHILOSOPHY OF JEROME CARDAN

Contemporary with Vives, however, and contradicting him, was Jerome Cardan (Geronimo Cardano)

(1501–1576), of Milan, Pavia, and Bologna, famous eccentric genius and speculative philosopher, scientist, and physician. He asserted that “the instruction of the deaf-and-dumb is difficult, but it is possible.” He had also suggested a device for teaching the blind to read and write, using the sense of touch. Of the deaf-mute he stated that he “can conceive that the word ‘bread,’ for example, as it stands written, represents the object that we point out to him. Just as after having seen any object, we preserve its form in the memory and can draw a resemblance of it, so the deaf-mute can preserve in his mind the forms of the written words and characters, and can associate them directly with ideas, for spoken words represent ideas only by convention, and written words can be made to represent ideas by convention.”

Cardan made two great contributions to the education of the deaf: (1) he proved that the organs of speech can be made effective in the deaf; and (2) his prestige seems to have been ample to shatter the bondage of the philosophies of Aristotle, thus releasing the Church from them and really inaugurating the new era of independent efforts to instruct the deaf.

THE FIRST TEACHERS OF THE DEAF

PEDRO PONCE DE LEON

Whether or not the story of St. John of Beverley and the deaf boy is true or apocryphal, and whether or not the works of the Venerable Bede were the actual inspiration, it is agreed that Pedro Ponce de Leon

(1520-1584), the Spanish Benedictine monk, was the first recorded teacher of the deaf. Born in Valladolid, he became the successful teacher of a number of deaf persons, principally of noble birth. His work was carried on at the monastery of San Salvador at Ona.

He taught his pupils speech, reading, writing, and arithmetic. They learned to pray, to assist at Mass, to know the doctrines of Christianity, and to confess themselves by speech. Some even learned Latin, Greek, and Italian.

Ponce's methods, according to contemporary accounts, included: (1) writing the names of objects; (2) saying them; (3) associating the two (pantomime and manual alphabet). He himself left no account of his methods, but wrote, "I have had for my pupils, who were deaf and dumb from birth, sons of great lords and notable people, whom I have taught to speak, read, write, and reckon."

BONET AND DE CARRION

The first three great teachers of the deaf were all Spaniards. In addition to de Leon, there were Bonet, who wrote the first textbook on the education of the deaf, and Ramires de Carrion, a contemporary. All three had as pupils members of the house of the Constable of Castille, thus giving the first historical reference to familial and possibly hereditary deafness.

In 1620 Juan Pablo Bonet, of Madrid, published his book, *A Simplification of the Alphabet on Methods of Teaching Deaf-Mutes to Speak*. He was a traveled man of affairs, busy at all times, either at the court, in the army, or as secretary to the Constable of Castille.

He claims full credit for the discovery of his own methods of teaching. His theory agreed in many respects with the present-day theory of phonetics. To him language was not words, but ideas and meanings. Verbs were action words, furnishing the basis of sense training. He considered reading a chance capability of the pupil. Yet one of his own pupils, Don Luis de Valasco, attained such marvelous precision in the art, that a treatise on his remarkable accomplishments was published by Sir Kenelm Digby, who visited Spain with the Prince of Wales (later Charles I) and wrote about the accomplishments of de Valasco upon his return to England.

Bonet "exercised the scholar in placing his tongue, teeth, and lips in the positions suitable for the articulation of each letter; then he made him exhale the air necessary for the production of voice." He declared that "the language of action is a natural language," and made use of signs as well as a manual alphabet.

Ramires de Carrion, in 1629, published his *Two Thousand Secrets of Nature*, in which he tells of his success in teaching the dumb to read, write, and speak. He cites particularly the personal achievements of the same young nobleman who had been taught by Bonet, whose successor he may have been.

After the death of de Carrion in the first half of the seventeenth century, the entire activity of educating the deaf, barring isolated incidents, withered in Spain. Yet from Spain, through Sir Kenelm Digby, came the inspiration which motivated the later work in England.

This experimental period revealed clearly that the

deaf could be educated. Thus the Church was forced to break with the theories of Aristotle. Likewise there came into use both lip reading and manual methods of communication, including natural gestures. The first efforts at instruction were aimed at establishing communication by speech. Writing was also employed, with natural signs and manual spelling as auxiliaries. Language instruction followed strict grammatical principles of procedure, fixed by drill. Lip reading was regarded as a skill, either innate in the child or lacking, and not a result of instruction. The results were meager and scattered; nevertheless results there were.

ENGLISH TEACHERS AND WRITERS

John Bulwer, aroused by Digby, made what he felt was a profound study of lip reading, which he recorded and published in 1648 as *Philocophus or the Deafe and Dumbe Mans Friend*. Delving into the past, as well as into the records of his own time, this physician revealed numerous instances of astounding success in lip reading. Like Defoe,¹ he had a versatile imagination and gave an air of reality to a highly imaginative concoction. He developed a fantastic theory of phonetics, concluding that "the form of Letters and so consequently of Words may be punctually observed and took notice of."

William Holder (1616-1698) made an analysis of sounds and of speech based on organic production. He emphasized instruction by reading the lips of others. People are dumb, he declared, by consequence of deafness, only because they are not taught to speak.

¹ See page 58.

He arranged sounds in the order of facility to acquire them.

The next claimant to a place of prominence is John Wallis (1616–1703), professor at Oxford. His tracts on the deaf appear in the form of letters to his associate, Robert Boyle. Weekly meetings with Boyle and others led to the founding in 1663 of the Royal Society. He was not very enthusiastic about lip reading, although he had employed it in his teaching.

George Dalgarno (1621(?)–1689) was interested chiefly in the possibility of developing a *universal* language, and from this he became interested in the problems of educating the deaf. He was skeptical about the value of lip reading, and advocated using a two-handed alphabet instead.

Henry Baker (1698–1774) succeeded in imparting speech and language to the daughter of a friend, a success which induced him to start a sort of private school. Indeed, his school was very private, for he would not divulge his methods; in fact, he demanded £100 bond of secrecy from each pupil concerning his method.

This same Henry Baker married a daughter of Daniel Defoe, who shortly prior to this had published (anonymously) *The History of the Life and Adventures of Mr. Duncan Campbell, a Gentleman, who, though Deaf and Dumb, Writes down any Stranger's name at first sight; with their Future Contingencies of Fortune; Now Living in Exeter, over against the Savoy in the Strand*. This was ingenious fiction, but it bore all the semblance of reality, so that the *Encyclopædia Britannica* (in 1819) classed it among authentic works

on the education of the deaf. The real Duncan Campbell, not deaf, pretended deafness and profited by the notoriety. This book is today considered a "collector's item" of value and interest.

JACOB RODRIGUES PEREIRE

Inspired by the success of the great teachers in Spain and England, many persons in other parts of Europe experimented with methods of instructing the deaf. The work of one of these teachers should be noted.

Jacob Rodrigues Pereire (1715-1780), a contemporary of Baker, was the first teacher of the deaf in France. A Jew of Spanish birth, he was exiled by persecution. His first pupil was his sister, whom he taught to speak. His success in teaching her inspired him to help others, with whom he made remarkable progress. In 1749 he appeared before the French Academy of Sciences to explain his methods. This meant not only fame and fortune for him, but also court audience. Later he was asked to undertake the education of the godchild of the Duc de Chaulnes, the noted Sabouraux de Fontenay, whom he taught for five years.

Pereire made use of the manual alphabet, but had advanced ideas in teaching language by a natural method of object, action, and idea identified with idiom; and he stressed the sequence of actual experience *immediately* translated into language.

IN THE EIGHTEENTH CENTURY

The beginning of the eighteenth century marked the initial period of organized schools for the deaf. However, in all instances such organization came not from

national recognition of a need for such schools, but from the efforts of some great leader often exerting international influence.

The year 1760 marked a new era in the education of the deaf; but with it also came, unfortunately, the beginning of a conflict which is still in existence today — namely, that of methods of communication.

All the earliest schools for the deaf began with oral methods, which are today the approved program. Abbé de l'Épée,¹ however, because of the necessity of teaching groups of sixty or more deaf pupils with little or no help, was compelled to devise a system of communication which would facilitate his teaching. These signs were further perfected by Sicard, one of the later French leaders, to the manual alphabet.

One of the greatest professional controversies in the education of the handicapped has centered around the superiority of methods for teaching the deaf, the manual or the oral method. The trend among educators of today is almost totally toward the oral system.

The deaf themselves, however, think highly of the manual method of communication, describing it as beautiful and expressive. In oral schools one problem is to prevent the children from sacrificing oral instruction surreptitiously to the very natural and easily acquired signs. The manual language restricts and limits the user to communication with those who know it and who are, with few exceptions, either deaf themselves or teachers of the deaf. This narrows the social horizon of the group and defeats one of the aims of education of the deaf — namely, complete partici-

¹ See page 61.

pation so far as possible in the world's affairs and the world's work.

LEADERS IN THE ORGANIZED SCHOOLS

The schools themselves were basically the laboratories of the great leaders in the education of the deaf in the various nations. Four men are outstanding: Charles Michel de l'Épée in France, Thomas Braidwood in Edinburgh, Samuel Heinicke in Leipzig, and Thomas Hopkins Gallaudet in the United States. The work of each and their followers represents the first really important chapter in the history of the care and education of the hypacusic.

ABBÉ DE L'ÉPÉE

Abbé de l'Épée (1712-1789) was born at Versailles. His father was architect to the king, Louis XIV. An innate gentleness of nature turned him toward the Church. In the midst of his ecclesiastic studies, he adopted the liberal views of the Jansenist creed, a branch of the Church not in great favor in Rome. When he applied for the priesthood, after passing the deaconship, instructions from Rome compelled the presiding bishop to refuse ordination to the young cleric.

De l'Épée then took up the study of law and was admitted to the bar. Dissatisfied with this profession, he renounced his practice and turned to work among the poor in Paris. At the same time, to gain an official protection for his work, he found a bishop in another diocese, the Bishop of Troyes, who was willing to or-

dain him to the priesthood despite his Jansenist leanings.

One day in 1760 he entered a humble dwelling in the poorer section of Paris. On the doorstep he noticed two young girls busily plying the needle. As he passed he greeted them, but got no response. Pondering upon their odd conduct, he was informed by the mother of the girls that they were deaf and dumb and that a kind priest had tried to give them some instruction.

In the compassion of his heart, de l'Épée found in these children the call to his life work. He found other pupils, and thus his school began. His first crude methods included both the oral and the manual systems. The school grew rapidly, and continued as a school for poor children.

His devotion to the poor and his self-sacrifice drew the attention of nobles and royalty, among them Louis XIV, Joseph II of Austria, Catherine of Russia, and Louis XVI. The latter ruler finally subsidized his school. Besides teaching children, the Abbé also trained other teachers: Abbé Storck (Vienna), Abbé Sylvester (Rome), Abbé Ulrich (Zurich), and a "female" from Turin. Sicard, his successor, was trained by him.

Because he had little or no help in carrying on instruction, he was compelled to devise a system of signs to supplement the oral method. Yet, in 1776, he wrote: "Never will the world train its fingers and eyes to have the pleasure of conversing with the deaf and dumb. The only serious means of giving them back

to society is to teach them how to hear with their eyes and speak with their tongues."

In 1784 de l'Épée published a complete exposition of his methods in *La Véritable-Manière d'instruire les Sourds et Muets, Confirmée par une Longue Expérience*.

De l'Épée died in 1789. His successor, Sicard, was an aggressive and dominating person; so people soon forgot de l'Épée for the moment. Yet as time has passed his fame and name have gathered power, so that today he holds the place of being the great apostle of the deaf and a great world benefactor.

The influence of de l'Épée was marked upon other great teachers of the handicapped, among them being Haüy,¹ the outstanding leader in the education of the blind. Yet there were those who were not in accord with the Abbé's point of view. He was not opposed to speech training for the deaf, nor speech for them; but he regarded speech as an incidental accomplishment. He stressed the intellectual and the spiritual as of prime importance.

ABBÉ SICARD

Abbé Roch-Ambroise Cucurron Sicard (1742-1822) became leader of the school upon the death of de l'Épée. He later became the most noted teacher of his time, developing and improving the Abbé's system and adding a philosophy to it. He used the manual alphabet, writing, and methodical signs.

Unfortunately he became enmeshed in the intricacies

¹ See page 26.

of the Revolution, and was imprisoned but later released. Then followed flight and return.

In 1794 the school was subsidized by the government, becoming eventually the National Institution of the Deaf. When Napoleon fled to Elba, Sicard again had to depart from France. The school was then taken over by a Baron de Gorando, a long-time benefactor of the school and a noted philanthropist. Later, in 1827, because of his interest in the deaf, he published *De l'Education des Sourds-Muets de Naissance*, which became for later students an authoritative work on the education of the deaf. It stressed writing as a basis of instruction; lip reading and speech were considered of secondary value.

Sicard was noted as an excellent teacher. He depended upon methodical signs, and language instruction by grammatical analysis, developing to a high degree in his pupils the power of abstract understanding.

The founding in France of the first school for the deaf and the development of the manual system of education swept the Heinicke influence to the United States, which became the educational battleground for over a century.

To Germany and Heinicke must be given the credit for originating the German or oral method of teaching the deaf.

SAMUEL HEINICKE

Samuel Heinicke (1727-1790) founded the first German school for the deaf. He was a man of strong will, unbending tenacity, and firm resolve. Of peasant

parentage, he was averse to peasant life but was interested in music. To escape the bondage of marriage, he ran away and led a life of wandering, eventually enlisting in the Dresden Royal Life Guards. In the service he met a deaf child, who won his attention and sympathy.

Heinicke was naturally a teacher, and he attempted some sort of instruction for the child. During the Seven Years War he was made a prisoner, but escaped and finally reached Hamburg. There he had many difficulties in earning a livelihood. The Danish ambassador, Count Schimmelmann, chose him as a reader and secretary. This meant a life of moderate comfort and intellectual activity, but Heinicke gave this up to become organist and village teacher at Eppendorf, near Hamburg. This opened a new period in his life. Here, despite great opposition, he began his work with the deaf.

On the whole, he was original in his efforts. His work attracted public notice and won recognition from learned men, for his pupils were highly successful. His school became the object of great interest and was visited by many persons of high rank. One of these was Elector Frederick August III of Saxony. On the latter's inducement, Heinicke moved his institution to Leipzig, where he obtained an annual personal appropriation of \$400. The school was definitely established there on April 14, 1778.

The first years were difficult ones, for the pupils were poor and could not pay for their training. The ensuing period was marked by struggle, sorrows, bitter-

ness, and reverses. In 1790 he died unnoticed; posterity later restored him to fame.

Heinicke's school became the pattern for others all over Germany. He wrote many papers and books on the education and psychology of the deaf. He was the great apostle of the oral method.

THE BRAIDWOODS

Paralleling the manual work of de l'Épée and the oral methods of Heinicke came, in England, what would be considered today an unethical monopoly and possibly a racket — the Braidwood School. It has had the greatest influence of all the European developments upon the education of the deaf in America.

Thomas Braidwood (1715–1806), a graduate of the University of Edinburgh, first started a school of mathematics. Enrolled therein was a man of wealth who was deaf. Braidwood undertook to teach him speech. Success attended his efforts and other pupils came to him, so that he abandoned his school of mathematics and turned to the education of the deaf exclusively. In this venture he was joined by his son. In 1783 he moved his school to Hackney, in London, where even after his death it was carried on by his son and his widow and later by his son's widow. They monopolized the oral methods in England as an exclusive family activity.

An American, Francis Green of Boston, sent his deaf son to the Braidwood School to be educated. In 1783 he wrote his *Vox Oculis Subjecta: A dissertation on the knowledge of language, to the naturally deaf, and (con-*

sequently) dumb; with a particular account of the Academy of Messrs. Braidwood of Edinburgh.

Major Thomas Bolling, of Cobbs, Virginia, had three deaf children, all of whom were sent to Braidwood, where they received an education and training in speech and speech reading. Their progress attracted the attention of Colonel William Bolling, who also had two deaf children.

John Braidwood, grandson of Thomas Braidwood, had come to America with plans to establish a school for the deaf in Baltimore, but because of various derelictions he landed in jail in New York instead. Colonel Bolling helped him to gain his freedom, and later he made him private tutor at Bolling Hall for all the Bolling children. Other deaf children were also sent to him for instruction. This small group formed a nucleus for a school, which after its organization was moved to Cobbs, in Chesterfield County near by.

In 1815 young Braidwood was given a large house, furniture, and a salary for his teaching services. He had everything in his favor — position, money, patron, school, good pupils. But being of a listless, dissipated nature, he fell into debt and left Virginia suddenly. In trouble again in New York, he decided to return to Cobbs for help.

Again the school was started, this time in Manchester, Virginia, with Braidwood as assistant to the Reverend Kirkpatrick. Again he fell into trouble, and again he quit. He lost position after position. He died as a barkeeper in 1820. The school, lacking leadership, gradually declined.

THOMAS HOPKINS GALLAUDET

Thomas Hopkins Gallaudet (1787-1851), whose name is immortalized in the only institution for the higher education of the deaf in the world, was the real founder of public education of the deaf in America. His efforts brought about the establishment of the first free and permanent public school for the deaf in the United States, at Hartford, Connecticut. This school has had a splendid record of achievement, and still is one of the outstanding schools. Not for a chosen few, or for private gain, the whole purpose of the school was the amelioration of the hard lot of deaf children. This effort marked the beginning of a permanent movement, and so Gallaudet is reckoned as one of the great American educators.

Gallaudet was born December 10, 1787. He was a person of moderate or feeble health, but of superior mind and spirit. When he was thirteen, the family moved from Philadelphia to Hartford, and at fifteen he entered Yale. He was graduated three years later. He intended to become a lawyer, but poor health prevented his doing so. From 1808 to 1810 he was a tutor at Yale. To improve his health, he traveled on horseback through Kentucky and Ohio, conducting business for a New York commercial house. In 1812 he began the study of theology at Andover Theological Seminary, graduating in 1814. His health failed again, so that he could not accept a settled pulpit; but he moved about, preaching occasionally.

Returning to Hartford, Gallaudet renewed his friendship with a Dr. Mason Cogswell, a near neighbor

of Gallaudet's father, and his little daughter, Alice, deaf from an illness in early childhood. While a theological student at the seminary, Gallaudet had met the child and, becoming interested, he had tried to teach her. He studied the works of Sicard, obtained for him by Dr. Cogswell, and was convinced that the child needed formal teaching.

Gallaudet's enthusiasm spurred Dr. Cogswell to call a meeting of neighbors at his home. The outcome of this was a resolution to send Gallaudet to London for further training. Funds for his expenses were raised by these neighbors; so he sailed in May, 1815. But the reception he found in England was discouraging. Secrecy and privacy were the prevailing order.

Gallaudet met Sicard, who was then on a lecture tour in London, and from him he received a cordial invitation to visit the school in Paris.

In the meantime he appealed to the Braidwood School for permission to study its methods, but was turned down because they knew of the efforts of John Braidwood in America. The result was nine months of disappointment and delay as well as patient but unsuccessful effort to make the necessary contact.

At last he turned to Paris (March 9, 1816), where he received an immediate welcome and every opportunity to obtain all the facts about the work. Thorough and open access to all facilities were provided. After three months of intensive study with Sicard, he set sail for home, taking with him Laurent Clerc, a deaf teacher. In August, 1816, he was back in New York.

In the meantime friends at home had been busy. An act of incorporation, secured from the legislature in

May, 1816, and a fund raised by private contributions helped him to establish his school. In October the state of Connecticut granted \$5000 in aid, said to be the first appropriation for education not in public schools. Gallaudet, with Clerc, traveled to New York, Philadelphia, and Boston, pleading for the cause, and obtained pledges of \$17,000.

The school opened April 15, 1817. In 1818 an appeal before Congress was made by Clerc for support, and as a result 23,000 acres of wild land, later sold for \$300,000, were secured as endowment. Gallaudet remained as head of the school for a number of years, contending with such difficulties as salaries, director opposition, and discontent among the teachers. However, the school had been set on sure foundations.

THE INFLUENCE OF GALLAUDET

In 1819 the legislature of Massachusetts voted to send its deaf children to Hartford. New Hampshire, Maine, and Rhode Island followed, and later South Carolina and Georgia did the same. Each contributed a certain amount from the state treasury.

Public exhibitions were given all over the country by Clerc and Gallaudet, making good use of the expressive language of signs to dramatize their cause. In every way this activity was a parallel of the American pioneer movement and spirit.

Gallaudet's method of instruction was manual and not oral. Would it have been oral if Gallaudet had been more favored in England, where that method predominated? Gallaudet himself stated that he sought to combine the best features of both systems. "I

should wish, and I yet hope, to combine the peculiar advantages of both the French and English modes of instruction," he wrote in August, 1815, while still in England. Such was the origin of the combined method in use in American schools.

However, perhaps from necessity the Hartford School became the staunchly defended citadel of manual methods of instruction, and so continued long after the oral method began to make headway elsewhere. It was also the pioneer in vocational training, instituting this as part of the school program in 1822. This program was soon adopted by other schools. Schools for the deaf were, at that time, the only schools in America that acted upon the need for such training.

With the impetus gained by the establishment of the Hartford School in 1817 and by the efforts of Gallaudet and Clerc to bring the matter before the country, there followed a veritable parade of new schools from many states. Among them were: the New York Institution for the Deaf (1817); the famed Pennsylvania school at Mt. Airy (1821); Kentucky (1823); Cincinnati, Ohio (1829); Virginia (1838); Indiana and Tennessee (1844); North Carolina (1845); Illinois (1846); South Carolina (1849); Michigan and Mississippi (1854).

So rapid was the appearance of these schools that in some states grave doubt was expressed as to their need. In Illinois the new school in Jacksonville was greeted as "the state's folly." The work of promotion was done by an almost set procedure. An enthusiastic drive would usually culminate in a demonstration of work by a group of pupils from the school in a neighboring

state. The legislature would soon thereafter enact the necessary legislation for a state school.

The outcome is that today there are 65 residential schools for deaf children, 124 day schools, and 20 private and denominational schools, with a total enrollment of almost 20,000 pupils and a staff of almost 3000 teachers.

The average age of the Hartford pupils in the beginning was 22. Many of the teachers in the Hartford School in the early years were chosen from the ministerial class and were college graduates. The spiritual and religious trend they introduced into the education of the deaf runs through all the early history. As other schools opened, they drew teachers or heads from Hartford, so that the same religious influence spread through the other schools during the first half of the century. The later emphasis gradually tended more to academic and vocational work.

In 1819 the first woman teacher was appointed in the New York Institute; one at Mt. Airy, in 1821, and another in 1833-1835. In 1851 there were only 4 women in the entire profession — 1 in Hartford, 3 in New York. In 1857 there were only 14 (12%); in 1868 there were 51 (31%); in 1870 there were 94 (42%); in 1895 there were 67%. Today 2200 or almost 80% of teachers in schools for the deaf are women. This change was induced mainly by the spread of the oral method and lowering of the age of admission for pupils.

Another evolution has taken place with regard to deaf teachers. At first there was a high percentage of them employed in schools for the deaf, but their number gradually decreased for a time. In recent years

there has been a renewed increase. The first decrease began with the rise of oral methods, followed by growth of the day-school movement; the recent increase is due probably to increased emphasis on vocational training.

From the very beginning there raged the war over methods of instruction. At first, under the prestige of the Hartford School, the cry was for full unlimited use of all manual methods. Gradually the debate centered on limiting signs to classes above the fifth grade. Then burst upon the scene the oral and speech methods.

ALEXANDER GRAHAM BELL ¹

Dr. Alexander Graham Bell occupied a unique place in the work with the deaf. Born in 1847 in Ontario, he came to the United States in April, 1871, as a teacher of oratory in Boston University. Professionally he was an expert in speech training, having acquired this experience under his father, Alexander Melville Bell, a leading phonetician and student of voice. The father wrote a book on organic phonetics, entitled *Visible Speech*. In this, each character in his alphabet represented the action of the vocal organs in producing the particular sound representing part of a symbol or letter. The son conceived the idea of applying his father's system of visible speech to practical purposes in the education of the deaf-born child.

Quite possibly this interest in the deaf came as a result of the young man's contact with Mabel, daughter

¹ The biographical material on Alexander Graham Bell has been obtained chiefly from Dr. Harris Taylor, a personal friend of the family.

of Gardiner Green Hubbard, a wealthy and philanthropic New Englander. The girl was deaf but had been taught speech and was able to read the lips. The scientist's interest soon developed into love, and he tried to invent something which would give a visible representation of speech movements which would help her. Bell received no encouragement in his experiments from any of the established schools. The prevailing belief was that articulation teaching was very much a waste of time. But due to the efforts of Sarah Fuller, organizer and first principal of the first day school for deaf children in Boston (the Horace Mann School), he was offered a two months' opportunity to demonstrate the merits of his method. At that time he was twenty-four years old, not very sturdy but with eager personality. He nursed three ambitions: to earn a living, to promote visible speech, and to study the science of sound.

The effectiveness of these ambitions may be judged from the fact that, five years later, in 1876, at the age of twenty-nine, he gave to the world the telephone. Here too is romance. The immediate success of the telephone was soon followed by Bell's marriage to Miss Mabel Hubbard, from whom he had derived inspiration and encouragement in his work.

The French government awarded a prize of fifteen thousand francs to the inventor of the telephone for what was considered the greatest discovery in the field of electricity. This sum Bell invested in telephone stock. From this investment came funds whereby, through Bell's generosity and interest, it was possible to found the Volta Bureau at Washington, D. C., for

the diffusion of knowledge pertaining to the deaf. Also through the influence and financial support of Bell's father the Volta Bureau Building was erected, in the dedication of which Helen Keller, a friend of Dr. Bell, took part. This building became the home of the American Association to Promote the Teaching of Speech to the Deaf, also founded by Alexander Graham Bell.

Bell's interest in the deaf knew no abatement. Rapidly he rose to a place of leadership in his profession. Always he stood firmly for speech methods, proving a great single human factor in promoting that type of work.

CARE AND EDUCATION OF THE HARD-OF-HEARING

It has been estimated that of the children termed "deaf," less than 25 per cent are totally so. Some have suffered only about 50 per cent of hearing loss. Furthermore, of the latter group, a large proportion developed impaired hearing *after* the advent of speech. Accordingly, although it was formerly the practice, they were incorrectly classified and educated as "deaf mutes." In the early years of education of the deaf an appalling number of persons, now known to be hard-of-hearing, were placed in sign-taught classes under teachers who had never learned to speak.

The hard-of-hearing form a much larger group than the deaf. Their number has been estimated to be around ten millions, if hard-of-hearing is accepted to mean "having some degree of auditory impairment or limitation." The actual number of the hard-of-hearing depends upon the interpretation and definition of

the term. Educationally, the basis for distinguishing the deaf from the hard-of-hearing is that the deaf receive their impairment before the advent of speech while the hard-of-hearing do not. Always, the goal is social adjustment and effectiveness. More dominant than degree of defect may often be the "personal equation."

The history of the care and treatment of the hard-of-hearing is unromantic, as compared with that of the deaf. The deaf are objects of pity and sympathy, though less so than the blind. The hard-of-hearing appear normal, and because of their partial ability to hear are not easily understood socially. Too often they have been classified as subnormal mentally instead of subnormal acoustically. Whether educated with the deaf or with normals, they seemed misfits. If with the deaf, they tended to adopt the life, the psychology, and the philosophy of the more defective group. If with normals, they showed classroom symptoms varying from behaviorisms and disciplinary liabilities to retardation.

It should be clearly understood that the hard-of-hearing have recognized this for some time. They have felt that their best fate would come from being held fairly close to the requirements of the normally-hearing. Present methods of educating them are based on this hypothesis.

Recognition of the hard-of-hearing as one variant in the deaf group goes back to the Code of Justinian. Undoubtedly, allowances were made all through history for varying degrees of loss of hearing, but the whole problem of the hard-of-hearing was not brought

forward until the middle of the past century. The battle between oral and manual methods in the education of the deaf seriously overshadowed any effort in behalf of the hard-of-hearing.

LEADERS IN THE DEVELOPMENT OF LIP READING

The work of many teachers in several countries has been largely responsible for promoting the education of the hard-of-hearing. This developed in a curious and apparently illogical sequence. First came lip reading for the deaf (page 52). Next, lip reading for the deaf child. From this developed lip reading for the hard-of-hearing adult. And finally came lip reading for the hard-of-hearing child, with the appearance of a variety of methods and texts. All instruction was individual until 1915, when modern group work began.¹

Herr Julius Müller-Walle, formerly a teacher in the School for the Deaf in Hamburg, in teaching a hard-of-hearing brother, found that the methods used in instructing the deaf were not applicable to the hard-of-hearing. From this experience he developed a method of teaching lip reading to adults.

Miss Martha Bruhn, an American, went to Germany to study Walle's methods, which she adapted to the English language. When she returned to America in September, 1902, she organized her own school for teaching adults. Her original interest in the work, as has been the case with many leaders in the conservation-of-hearing movement, was a result of her own failing hearing. The basis of the Bruhn method is syllable drill. Syllables are the framework on which she builds

¹ See page 79.

her sentences. In spite of the fact that Müller-Walle is said to have developed his method in 1875, it is doubtful whether any widespread interest in the modern program began much before 1900.

In America, Tillie Warren attempted to meet the need for lip-reading instruction for the hard-of-hearing through a method based on the study and memorizing of pictures of lip movements. A brilliant but hard-of-hearing young man, Edward Bartlett Nitchie, born in Brooklyn, November 18, 1876, enrolled in one of Miss Warren's classes. He found great difficulty in mastering the work, but became interested and resolved to learn to teach it.

Nitchie became Miss Warren's assistant and secretary. However, they differed in their fundamental attitude toward the subject. In 1903 Nitchie opened his own studio in New York City, where he offered courses in regular school branches to hard-of-hearing children, but later devoted himself solely to his method of teaching lip reading. His was a steady progress. His insight into the deepest needs of the hard-of-hearing won him recognized leadership in the work. The success of his work led to the founding of the New York League for the Hard-of-Hearing in 1910. This league was the nucleus from which, in 1919, Dr. Wendell C. Phillips founded the American Society for the Hard-of-Hearing.

Continuing the history of lip reading for the hard-of-hearing, Miss Cora Kinzie developed, around 1914, a method of teaching the subject, using what was basically a combination of the Nitchie and Müller-Walle methods, uniting Bruhn's classification of introductory

sounds and Nitchie's psychological theories. In this work she was later joined by her sister, Rose. They used the term "speech reading" instead of lip reading, thereby originating a controversy in terminology almost as great as the conflict in methodology between the manual and oral instruction of the deaf.

From Jena, Germany, came the Brauckmann or Jena method, developed by Karl Brauckmann, who, like his father, directed his own school for deaf and hard-of-hearing children. In 1900, dissatisfied with existing methods of teaching lip reading, he developed his own. Certain of his pupils introduced the method in this country about 1925, although it has never met with the popular acceptance of the other methods — possibly because it differs radically from them, not only in methods, but also in approach and psychology. Advantages claimed are: relief of mental stress and of muscular tension; increase of body suppleness; improvement of voice and enunciation, with the expected acquirements of ability in lip reading. From others came the Whilden-Scally method used in the public schools in Baltimore, and the Mason method, known as Visual Hearing, which makes use of motion pictures.

To Miss Mary Woodrow in Brooklyn, in 1913, and to Miss Louise Morgenstern (later Mrs. Kurt Neuschutz) in New York, may be credited a new development, lip reading taught in evening classes in public schools. At the request of Mr. Nitchie, in 1915, Miss Estelle Samuelson, one of his outstanding pupils, took over the Morgenstern class following its organization, which was in coöperation with the pioneering New York League for the Hard-of-Hearing. The movement

soon spread to other large cities. In 1918 parallel work was started with army men at Cape May.

In 1920 Miss Caroline F. Kimball of Lynn, Massachusetts, and Miss Alice Howe of Rochester, New York, opened the first public school classes in lip reading for the hard-of-hearing children in their respective classes.

At the present time lip-reading instruction for hard-of-hearing children is a definitely accepted part of the service public schools are expected to render. Failure to provide it or to make other provisions for a conservation-of-hearing program is a serious reflection upon a community.

HEARING SURVEYS

Perhaps one factor which retarded the progress of the development of lip reading for deafened adults and children was the failure to recognize the large number of persons represented. When the matter was presented to professional bodies, there may have been passing interest, but certainly no steps were taken to remedy the situation.

Dr. Samuel Sexton, aural surgeon of the New York Eye and Ear Infirmary, testing children from 1880 to 1884, found 371 in the public schools of New York, all with severe hearing defects. He read a paper (1885) before the International Congress of Educators in New Orleans, urging that greater efforts be made to classify hard-of-hearing children in the public schools, without the idea of giving them special instruction. Nothing came from his appeal. In 1884 Dr. Gillespie, of the Nebraska Institute, was experimenting with hard-

of-hearing children in his school. He definitely recognized the need for separate training for the deaf.

In other early hearing surveys, tests in Chicago (1899) revealed that $15\frac{1}{4}$ per cent of the children who entered grade work at the age of six had defective hearing. In Providence, tests revealed that more than 10 per cent out of about 22,000 children examined were deafened. In 1910 Dr. Max Goldstein, the famous otologist and educator of St. Louis, estimated that 20 per cent of the school children in the United States had impaired hearing. In 1921, and again in 1922, in the conferences of the American Association (later the Society) for the Hard-of-Hearing, the needs of the hard-of-hearing children received greater and greater stress. In 1924 the society appointed a committee for the survey of hard-of-hearing children. From its efforts and the technical contributions of Harvey Fletcher, Ph.D., of the Bell Telephone Laboratories, Edmund P. Fowler, M.D., an otologist, and their associates have come a series of mechanical hearing tests known as audiometers which have made possible surveys of the hearing of large groups. As a result, there is now proof that about three million or 14 per cent of all school children are hard of hearing. Of these not less than 10 per cent require lip-reading instruction.

In 1934, through the agency of the W.P.A., large Federal country-wide grants were made to provide lip reading for the hard-of-hearing adults and to set up hearing-conservation projects for school children. The one in New York City is still in operation, with a

personnel of 150. An educational project in the psychology of the hard-of-hearing child was directed by Dr. Rudolf Pintner of Teachers College, Columbia University, to parallel this work.

The largest and most significant hearing survey in the United States was conducted in New York City (1936-1937) under the direction of this same Works Progress Administration. Coöperation was given by the Department of Education of New York City, the New York Academy of Medicine, the New York League for the Hard-of-Hearing, and other agencies. Not only a survey, but also a complete program for conservation-of-hearing was provided. Of the 645,467 children tested, 73,327 or more than 11% have impaired hearing. Of this number, only 4830 were obtaining aid through lip-reading instruction.

RECOMMENDATIONS FOR A PROGRAM OF ACTION

The American Federation of Organizations for the Hard-of-Hearing (which has since adopted the simpler name of the American Society for the Hard-of-Hearing) has set itself to conduct a vigorous aggressive program of enlightenment, to bring about definite amelioration of the unpleasant lot of hard-of-hearing children. It aims for:

1. Observation hearing tests and training as early as the pre-school age.
2. Hearing-conservation programs.
3. No segregation for the hard-of-hearing child.
4. No hard-of-hearing children in schools for the deaf.

5. Recognition of lip reading as a fully credited school subject.
6. Recognition of hearing aid as an everyday practical use.
7. Conservation of voice and speech.
8. Vocational guidance.
9. Better understanding of the hard-of-hearing.

The recommendations of the White House Conference in 1933 have never been entirely realized, but efforts are being made to live up to them. They are:

1. The discovery of every hard-of-hearing child in the school system, this to be done by medical examination of every child who enters school.
2. Every child with impaired hearing should get medical attention.
3. All public schools should be encouraged to install special classes for the hard-of-hearing.
4. Surveys should be made for integration and promotion of a basic scientific research on problems of audition.
5. Provisions should be made to continue educational research.
6. There should be established nursery schools for the very young who are found to be deaf.

The Division of Health and Physical Education of the department of education of the State of New York has embarked on a very comprehensive Conservation of Hearing program to bring optimum hearing to every child in the state. The medical examination and fol-

low-up is a legal responsibility of every principal. It includes the following points:

1. All children are to be tested by an audiometer. All those showing a loss of 9 decibels, or more, in both or one ear in the rough test should be given a retest on the same instrument in a short space of time, during which any temporary condition could have cleared up.
2. Complete tests on a wide-tone or pitch-range audiometer should be given individually to all children with a loss of 9 decibels. Both ears tested and results accurately charted.
3. Otological examination follows for those actually found to have this loss. Trustees and Board of Examination must provide these special examinations.
4. Educational guidance, suited to the individual needs of the child, should include one compensation, or a combination of many compensations, such as: advantageous seating, lip reading, voice and speech training, hearing aids, educational coaching, special class education, vocational counsel.

The tests are given to entire classes at one time, with a phono-audiometer to screen out those with defective hearing for further study. This forms only the basic or rough test. A complete wide-tone test is given those children whose loss, with the 4-B audiometer, is 9 or more in either ear. Upon finding a loss of 10 decibels or more on pitch-tone test, the parent or guardian is

notified. Otological examination follows and necessary treatment is prescribed.

Accurate records are to be kept on file at the child's school, so that at any time anyone of the faculty or medical staff can have access to them.

Today, the majority of the schools are awake to the needs facing the hard-of-hearing children. Wherever funds are available they are being used to provide the proper care.

One of the first things is to teach the child lip reading. All his life he is going to have to remain in the world with people who speak. The former sign language, which was taught the deaf and to which the hard-of-hearing were also subjected, isolated them completely from the everyday world, because so few people ever knew the code. With lip reading, the hard-of-hearing person is never at a loss in any environment.

For this reason special classes in lip reading should be established in a sufficient number of schools for all hard-of-hearing to be able to avail themselves of them.

Paralleling these classes, speech-correction classes should be instituted to assist the hard-of-hearing, as they frequently have speech defects, especially should they have been in contact with the deaf and fallen in with their stilted, mechanical way of speaking.

If a child is given lip reading and special training, there is no reason why he cannot remain in regular school and benefit from all the training and contact that the normal group can give him.

In some places there are special classes for the hard-of-hearing (often called deaf-oral classes), where they do not mix with the others. This, when possible, should

be avoided. Since the child, when grown, will have to take his place in the world, he should begin his adjustments early. Accordingly, a type of class paralleling the sight-saving class (non-segregated type) is arousing interest, when brief periods of lip-reading instruction fail to suffice.

In the larger cities the child has a well-planned program facing him. He is able to attend regular classes, thanks to the lip-reading classes which he attends in the afternoons or during his study periods. He is able to contribute as his comrades do. He can play their games and is their equal in most activities. His teacher seats him advantageously in the room and with the proper amount of assistance he can equal and sometimes outstrip his schoolmates.

When he arrives at the age of leaving school, he is more fortunate than other handicapped children. If he is proficient in the art of lip reading, there are a great number of professions he can enter; or there are jobs that he can do very well — better, in fact, than the average, because he is less likely to be distracted by the host of sounds that disturb and tire most office workers. Someone, however, has to give him the proper vocational guidance, or he may find himself in the wrong field.

Many adults, upon finding that their hearing is waning, have been able to learn lip reading and have been able to continue earning their own living practically without interruption. About 90 per cent of the deaf and hard-of-hearing are said to be self-supporting. As a class, when given the proper training, they, of all the handicapped, can lead the most normal lives.

Chapter Four

THE HANDICAPPED IN SPEECH

BECAUSE of the wide variety of types of handicaps in speech and because of the great number of causes to which these defects are attributed, the history of the care and treatment of this kind of handicapped is a complex one.

Good speech has always been prized. Conversely, he who suffered from a defect in speech was an object of taunt and ridicule. From ancient times, therefore, speech defects have been serious social handicaps. So they are today, though their importance is often overshadowed by more pathetic and even more striking sensory and motor losses.

FAMOUS PERSONS IN HISTORY

Defective speech, of great or less degree and of varying types, through the ages, has been a common problem. Likewise it has been no respecter of persons. An amazing number of historically important personages have been recorded among the sufferers.

BIBLICAL ACCOUNTS

In ancient times Moses (Exodus IV, 10) described himself as "slow of speech and of a slow tongue," when trying to refuse to fulfill his mission as lawgiver. Indeed, legend tells that Aaron, his brother, accompanied Moses, in order to speak for him when he visited Pharaoh to plead in behalf of the Israelites. That the Israelites of his time regarded defects of speech as equal

to deafness and blindness is indicated in Moses' report of God's reply (Exodus IV, 11): "Who hath made man's mouth? Or who maketh the dumb, or deaf, or the seeing, or the blind? Have not I, the Lord?" Later, in the prophecies of Isaiah (Isaiah XXXII, III, 4), there appears: "The eyes of them that see shall not be dim, and the ears of them that hear shall hearken. The heart also of the rash shall understand knowledge, and the tongue of the stammerers shall be ready to speak plainly."

That a national speech defect became the reason for a famous victory in Biblical times is revealed in Judges XII, 4-6, where it is recorded that the Gileadites and the Ephraimites were at war with each other. The king of the former decreed that if any stranger came to the entrance of the country and asked admittance the guards should say to him, "Are you a stranger?" If he replied, "No, I am a native, I belong here," then the guards were to test him by demanding that he say the word *Shibboleth*. It was known that the Ephraimites could not say *sh* but pronounced it as *s*. If the man said *Sibboleth*, he was known to be an enemy and was thereafter slain.

Of the works of the Great Physician, Mark (Mark VII, 32-37) tells the story of His healing one "that was deaf and had an impediment in his speech . . . and he took him aside from the multitude, and put his fingers into his ears . . . and touched his tongue . . . And straightway his ears were opened, and the string of his tongue was loose, and he spake plain." It might be added that the accomplishment in this miracle is identical with the prime objectives of the educator of

the deaf and the speech defective. No such perfection of result has yet been attainable, even with all the aids of modern science.

EXAMPLES FROM ANCIENT GREECE AND ROME

The earliest known Greek speech defective was Aesop, the fabulist. Herodotus (484 (?) – 425 B.C.) states that Battos, the son of Polymnestos, stammered in early childhood, the defect manifesting itself as involuntary stoppage of the voice or complete unintelligibility. It is thought that he was actually given the name Battos (which in Greek means “stammering”) because of his infirmity.

The Greek vocabulary contains a large variety of terms relating to impediments of speech; so it is logical to conclude that this was due to the great number of persons with speech defects found among the ancient Hellenes. Aristophanes reports as a lisper Alcibiades (455 (?) – 404 B.C.), the distinguished statesman and military leader, his defect being the substitution of “l” or “r.” Aristotle (384–322 B.C.), a stutterer himself, stated: “Lisping is due to the inability to master a letter . . . ; stammering is due to the dropping out of some letter or syllable; hesitancy is due to the inability to join one syllable to another. All of these are due to the want of power, for the tongue is not an efficient servant of the intelligence.” Here is, at least, one of the earliest instances of a defective studying himself and his defect subjectively and developing theories and practices for the remedying of similar situations.

Demosthenes, the silver-tongued Greek orator of 383–322 B.C., is the center of many a fable. Accord-

ing to the best authority, he was actually a stammerer, who perfected a self-devised technique for curing his defect. The stories are legion, giving the details of Demosthenes talking alone, on the beach, with pebbles in his mouth. His clarity of diction appears to have been a very successful by-product of this technique.

It is recorded that Demosthenes had projecting upper teeth which came down over his lower lip when he shut his mouth, making "I see" "I fee." Nervousness, because of poor speech, made his voice small and feeble. Lacking the modern noises of industry and traffic to combat, he called loud answers to the angry sea. Some historians state that he could not pronounce "r"; others that he lisped; others that he stuttered; others that, when he tightened his tongue at the top of his mouth, he had to bring it down to keep from swallowing the pebbles used in his self-training as an orator.

The varying and fantastic theories regarding the famous orator's disability are no more bizarre or amusing than the theories regarding many factors in speech which are offered seriously even at the present time. It is claimed by some that the pebbles were but an incidental part of Demosthenes' treatment. Some have stated that he spent months training his voice, using a mirror while doing his vocal gymnastics and applying every power of his will to the conquest of the defect.

Charvin (1867), the great French specialist, claimed that Satyrus, the Grecian actor, was responsible for curing Demosthenes — the actor being the first to combat stuttering by lessons of diction. This is, of course, a natural and simple means accorded modern success.

In ancient Rome stammering and lisping were

"classed with other infirmities and peculiarities. The stammerer had his special name, *Balbus Blæsus* (cf. Greek *Battos*), as had the squinter, the bandy-legged, and the long-nosed person. Mention of defective speech was made by Cicero, the Roman orator of 106-43 B.C.; Valerius Maximus, the rhetorician of the first century A.D.; and Catullus, the poet of 87-54 B.C."¹ Famous Romans who stuttered include Vergil, the poet, and Cato, of Utica, the philosopher.

LATER NOTED PERSONS

Between the ancient days and the fifteenth century, less interest in speech defectives seems to have been shown, although speech impairments or loss accompanying deafness were not forgotten. For some unknown reasons, about 1500 A.D. a new recording of speech defectives began. There are references to stutterers as follows: Erasmus (1466-1536); Tartaglia, the Italian mathematician (1500-1557); Malherbe, the French *littérateur* (1555-1628); King Eric of Sweden (1553-1577); Mary II of England (1662-1694); Turenne, Marshal of France (1611-1675); Louis XIII of France (1610-1643); and Cardan.² In the nineteenth century, the list included Mrs. Elizabeth Inchbald, the English actress (1753-1821); Desmoulins, the French revolutionist (1760-1794); and Manzoni, the Italian poet (1785-1873); Merkel, in Germany, himself a stutterer, placed the primary cause of the defect in the psychical field, considering that the will creates a dis-

¹ From Appelt, Alfred, *The Real Cause of Stammering and Its Permanent Cure*. Methuen & Co., Ltd., London; 1929.

² See page 53.

turbance in equilibrium between articulation and vocalization.

England in the nineteenth century produced certain famous stutterers, among them Charles Lamb, Oliver Goldsmith, Leigh Hunt, Canon Charles Kingsley, and Erasmus Darwin and his son, Charles Darwin. There was also Dr. Samuel Johnson, who suffered from a speech defect, which some, perhaps incorrectly, attributed to a childhood history of scrofula, the "King's Evil"—i.e., tuberculosis of the lymph nodes of the neck. Other stutterers included Moses Mendelssohn¹ and the artist David.²

EARLY THEORIES OF SPEECH DEFECTS

With human emphasis upon the value of good speech and upon the striking disabilities of bad speech, it is not surprising to find history teeming with a multitude of theories as to the causation of the defects and an even greater number of proposed remedies, most of which are to be remembered as queer interpretations of science rather than for their curative values.

FIRST THEORIES AND ATTEMPTS AT REMEDY

From Hippocrates, the father of medicine (460–359 or 377 B.C.), came one of the earliest, if not the earliest, set theories about speech defects. He stated that stammerers with voluble tongues are full of black bile. He also recognized the condition of aphasia, and distinguished between aphonia, or loss of voice, and anaudia,

¹ See page 95.

² Data from *Clinical Medicine and Surgery*, April, 1934.

or loss of speech, as of different types. He employed both terms, however, in the description of the same ailment. Difficulties of translation prevent attributing too great sagacity to Hippocrates, in his knowledge of speech defects.

Galen (131–200 A.D.), an outstanding physician of Greece and the founder of experimental physiology, stated that stammering was caused by a debility of the muscles from diminution of heat, a fantastic enough theory. Medieval physicians, following Galen, attempted to cure dumbness by an operation on the ligament of the tongue.

However, the same gap previously noted in the discussion of the existence of famous speech defectives also exists in terms of theories and remedies. Avicenna (980–1037) took up the fantastic themes again. This Arabian educator and philosopher claimed that humidity caused mollification of the tongue, which in turn induced stuttering.¹

The next historical reference to further theories occurs in the fourteenth century, when Guy de Chauliac (1300–1368), the French physician, contended that when speech defects occurred there was too large a quantity of humors (fluids), affecting the nerves, muscles, and substance of the tongue.¹

Beginning with the sixteenth century, almost a flood of cures and theories were advanced, mostly of historical interest rather than practical value, adding to rather than clarifying the existing confusion.

¹ Data from Bluemel, Charles S., *Stammering and Allied Disorders*. The Macmillan Company, New York; 1935.

PROGRESS DURING THREE CENTURIES — 1500 TO 1800

Turning to what may be considered the modern period — the sixteenth century, Felix Platter (1530–1614), a distinguished German physician, presented the theory that there is an association in function between the tongue and the organ of hearing in the production of speech. This theory prevailed for nearly a century.

From a contemporary, Hieronymus Mercurialis, there came in 1583 a definite reference to and description of stammering, perhaps the earliest record in scientific literature. This appeared in his monograph *De Morbis Puerorum Tractatus*. Even as early as this, there were vague references to the psychology and mental philosophy of the matter.

In 1584 Hieronymus Mercurialis¹ quoted the authority of medical and other learned men of antiquity, distinguishing between chronic stammering and accidental stammering. The cause of chronic stammering, he asserted, was to be found in a humidity of the brain, which disturbed the normal action of this "central organ." Accidental stammering was caused by sudden emotions and other influences which injure the whole nervous system.² Hieronymus Fabritius (1537–1619), in his *De Locutione*, wrote in a specialized manner of the larynx and its construction.

Francis Bacon, the English essayist (1561–1626), advanced the belief "that stammering was caused by refrigeration of the tongue, whereby it was less apt to

¹ Mercurialis: *De Puerorum Morbia*, Frankofurte, 1584. (Probably German work published in Frankfurt.)

² See Appelt, Alfred, *op. cit.*

move." He recommended that the stammerer drink a little wine "because it heateth."¹

Eighteenth-century medical men, including Santorini (Italian anatomist, 1681-1737) and Morgagni (Italian pathologist, 1682-1771), disregarded the contribution of Mercurialis (regarding the brain as the seat of affliction), and considered stammering to be the result of anatomic lesions and malformations of the organs connected with speech. Kustner (1716) and Bergen (1756) traced stammering to unsoundness of the muscles of the speech organs. Moses Mendelssohn (1729-1786), German Jewish philosopher and a stammerer himself, contended that the stammerer's speech was more psychological than mechanical. He argued that this was true because stammerers have less difficulty in speaking when alone, when speaking slowly or loudly, and when singing.

Johann Friedrich Dieffenbach (1792-1847) of Königsberg was one of many really great physicians and surgeons whose interest, even in the modern period, led them into erroneous pathways in attempting to aid speech defectives. A man who developed great skill in plastic surgery, he may have been encouraged through his success in treating strabismus (crossed eyes) by severing the tendons of certain eye muscles. At any rate, he attempted the erroneous procedure of subcutaneous division of the lingual muscles as a cure for stammering (1841), producing many perverse results in his patients. This operation he described in his monograph *Die Heilung des Stotterns durch eine neue chirurgisch Operation*, reporting about twenty

¹ Bluemel, Charles S., *op. cit.*

cases. His operation resulted in reducing the length of the tongue and elevating its surface. It is important to note in passing that this surgeon was admirable as an individual, as a teacher, and as a professional man, upholding the highest ideals of the healing art.

"Sauvage (1771), in France, thought that defective speech was due to a certain weakness of the soft palate, the uvula, and the root of the tongue, and the immobility consequent upon such conditions."¹

RESEARCH IN THE NINETEENTH CENTURY

The nineteenth century, the world over, was a prolific period of research in behalf of the defective in speech.

Mme. Leigh (America) and Malebouche (France, 1841) held theories similar to those of Sauvage. They attributed impediments of speech to a weakness of the tongue which caused it to be kept in an incorrect position during the act of speaking — namely, at the bottom of the mouth instead of in the roof. Mme. Leigh consequently devised a method of correction of defects. This procedure required that the tongue, even during a state of rest, should be kept in such a position as to enable its tip to lie close to the front part of the palate. Since it was believed necessary to maintain this position even during the night, a small roll of wet linen was placed under the tongue.¹

Alexander Bell (1836) repudiated the wanton cruelty of surgical operations, the ministering of the quack and

¹ Data from Appelt, Alfred, *op. cit.*

of persons who have not studied the phenomena of speech.

Alexander Graham Bell ¹ (1872), in using the Visible Speech symbols and the method proposed by his father, Alexander Melville Bell, taught successfully the various branches of speech correction.

IN FRANCE

Jean-Marc-Gaspard Itard (1817), an otologist of Provence, published a treatise on stammering in which he expressed the opinion that stammering is caused by a spasm, induced by a weakness of the motor organs of the larynx and tongue. He is the first author to have treated the affliction as a *pathological symptom*. Voisin (1821) and Rullier (1828) recognized in stammering the effect of irregular nervous stimulation of the muscles from the brain. Serres d'Alais (1829) classed two kinds of stammering, both caused by an *affection nerveuse*. One kind was characterized by clonic spasms of articulatory muscles, the other was attributed to tetanus of the muscles connected with respiration and voice production. Deleau (1829) agreed with Merkel.²

Hervez de Chegoin (1830), a surgeon, traced speech defects to abnormal formations of the tongue and prescribed surgical operations as the cure. Marc Dax (1836) recognized that the left cerebral hemisphere is highly important in language functions. Colombat (1840) adopted this point of view, too, but also followed Serres d'Alais and described the stammering

¹ See page 73.

² See page 91.

block as a tetanic and convulsive state, instead of a state of spasmodic immobility as diagnosed earlier by Rullier.

Du Soit (1840) voiced the opinion that stammering resulted from spasms of the respiratory organs. Bonnet (1841), Froriep, and Oré (1866) defended the surgical method of cure. Broca, in 1861, claimed the third front convolution of the left hemisphere of the brain, now called Broca's area, to be the seat of "articulated language." Lesions there led to aphasia, according to his theory.

IN GERMANY

Germany, too, made its contribution to these research studies.

Cormack (German or English, 1828) and Beesel (1843) lay the blame on incorrect respiration. Müller (1840), a physiologist, and Dieffenbach¹ (1841), a surgeon, explained the cause of the defect to be spasms of the glottis. Schulthess (1830) was of the same opinion and compared the ailment to hydrophobia, suggesting that the terms *phonophobia* and *lalophobia* should be used to describe it. Blume (1843) revised Colombat's theory by adding to the central (brain) influence the factor of disturbed harmony between two concurrent phenomena, thinking and speaking.

Klencke (1844) defined stammering as "the outcome of a want of freedom of the soul with regard to the stimuli of the most important part of culture, speech." Thomé (1867) found the fundamental cause of stammering to be the abnormal working of the central ner-

¹ See page 95.

vous apparatus, due to certain emotions which lead to respiratory disturbances. Wernicke (1874) assigned the auditory center to the first temporal convolution, and the conceptual basis of articulated speech to Broca's area. Inability to receive images, and therefore lack of understanding of spoken language, resulted from the destruction of the first temporal convolution.

Shrank (1877) claimed that abnormal emotional disturbances hampered the will of the stutterer, thereby causing symptoms of dread and anxiety in the face of the speech situation. Ruff (1886) tried to determine the portions of the stutterer's brain that are responsible for his defect. He suggested that the center of speech had been exposed to some injurious influence — e.g., lesion, shock, or intense emotion. His theory is based upon that of Coen (1883). Wyneken and Denhardt (1890) found the cause of stuttering to be lack of confidence and self-control.

IN GREAT BRITAIN

Results were obtained from a similar program of study conducted in Great Britain.

Charles Bell (1832), Scottish anatomist, described stammering as a "very partial chorea." He ascribed its cause to the inadequate capacity to coördinate properly the different actions required for fluent speech, and consequent upon a certain debility of the nerves which control the organs of speech. This theory has been adopted since by Benedict (1868), Rosenthal (1870), Guillaume (1872), and Kussmaul (1885). Yearsly and Braid (1841) found tonsil and uvula malformations to be the root of speech evils. Marshal-

Hall (1841) and Lichtinger (1844) believed stammering to be a reflex spasm caused by the excitomotor spinal action predominating over cerebral influence.

Bastian (1869), who was French but who wrote in English, localized auditory and visual word centers, as well as tongue and hand centers. He claimed that aphasia resulted from the destruction of the auditory or visual centers, or of the connecting fibers thereof, and the lower effector centers of the tongue, lips, or hand.

Hughlings Jackson (1864-1893) was the first theorist and practitioner to consider a dynamic, as opposed to the then prevalent structural, concept of behavior.

Meanwhile in Russia, Sikorski (1894) and L. Sandow (1898) held stammering to be a psychoneurosis.

FURTHER RESEARCH INDICATED

All these world-wide studies contributed both added knowledge and added confusion to the picture. Still another approach was needed if the evil was to be combated.

On the whole, the writings of the nineteenth century are largely descriptive, dealing minutely with the anatomy and physiology of speech, but throwing little light on the nature of stammering. Statements of cause were little more than descriptions of the particular phenomenon.

THE MODERN SCIENTIFIC APPROACH

The explanations of the various disorders of speech, as well as the basic facts about the function of speech

itself, have been increasingly attempted by scientific fact rather than by surmise and metaphysics. The early literature teems with the latter explanations, a point of some importance to the student interested in historical though inaccurate basic material.

It is now known that a large percentage of the entire body is involved in or influenced by the production of voice and speech. Recognized as of increasing importance are cortical localization and the interrelation of mental and physical stimuli. Involved, too, are the fundamental principles of psychology.

Dr. E. W. Scripture, an American, diagnosed the problem of defective speech as psychoanalytical, but treated it more as a speech fault, recommending exercises for voice, rhythm, and articulation. He considered other defects, such as harshness of voice, drawling in speaking, and nasality, to be so prevalent that she suggested that all school children should be considered as incipient stutterers.

Not until the twentieth century was descriptive research supplemented by systematic investigation in the field of stuttering. At last the problem was approached from the psychological and neurological points of view.

CLASSIFICATION OF DISORDERS OF SPEECH

Realizing the need of a systematic international classification of disorders of speech, the American Society for the Study of Disorders of Speech appointed a Nomenclature Committee to prepare such a classification. This is, at present, under revision. It may be helpful, however, to recognize the seven major groups, the pre-

fix of each of which is "Dys," which may be interpreted as the adjective "difficult."

I. Dysarthria, or defects of articulation due to lesions of the nervous system.

II. Dyslalia, or functional and organic defects of articulation.

III. Dyslogia, or difficulty in expression of ideas by speech, due to psychoses.

IV. Dysphagia, or impairment of language, due to weakened mental imagery (through disease, shock, or injury).

V. Dysphemia, or variable disorders of speech, due to psychoneuroses.

VI. Dysphonia, or defects of voice, including all disorders of phonation, due to organic or functional disorders of vocal cords or to defective respiration.

VII. Dysrhythmia, or defects of rhythm (other than stuttering).

A large number of other classifications exist, many being created for special needs such as grouping of cases for administrative purposes. In some cases as many as twenty terms have been given to exactly the same disorder.

ASSOCIATION OF SPEECH DEFECTS WITH OTHER CONDITIONS

It is well known that speech defects may be coincident with or secondary to both mental handicaps and other types of physical handicap. The outstanding examples are the speech difficulties of the deaf and the hard-of-hearing.

Stuttering is often associated with certain situations which bring forth a motor defect. Other speech defects are often caused by cerebral palsy. This produces a spastic condition of the muscles which cannot be controlled voluntarily. Birth palsy also produces a distorted motor pattern which results in spastic speech. In the lesion of the nervous system, hemiplegia, one side of the body is paralyzed and this interferes with normal speech.

Feeble-mindedness is often accompanied by speech faults, which in this case are due to a lack of muscle tonicity.

Although defects of articulation are distinctly more prevalent among mental defectives, one investigator, Wallin, found that stuttering is more prevalent among normal retarded and backward children than among mental defectives.

DEVELOPMENT OF REMEDIAL PROGRAMS

Speech is the most important medium of social communication and adjustment. The history of speech training has involved attempts to answer these three questions:

- (1) What is the speech defect involved — signs, symptoms, diagnosis.
- (2) What is the probable cause — etiology.
- (3) What can be done about the speech defect — therapy.

Most persons have speech faults of one kind or another. These become of considerable importance in social and economic situations. A marked foreign accent, for example, will be a hindrance to a person's

making successful adjustments. Department stores and other large service agencies have speech experts to train their clerks and other employees to develop pleasant speaking voices. The more serious speech defects must be met with programs of considerable scope.

THE INCIDENCE OF SPEECH DEFECTS

As in practically all situations dealing with the handicapped, inaccuracies and meagerness of data make difficult an estimate of the true incidence of various types of defectives.

Data as to incidence of speech defects in the school population will indicate the seriousness of the problem. Surveys universally reveal that nine in every thousand children are stutterers. Dr. Scripture (1913) estimated that the number of speech defectives in New York City was 25,000. In 1920 there were 500,000 speech defectives in the United States.

According to the report of the White House Conference on Child Welfare and Protection (1931) there were at that time one million school children in the United States, between the ages of five and eighteen, so handicapped in speech as to require remedial treatment and training. This estimate did not include those who quit school before reaching the age of eighteen. The same report suggested that the total number might be even greater than the estimate given.

Speech defects, especially stuttering, occur at least twice as often among boys as among girls — a condition to be attributed possibly to the nervous tie-up with the greater pressure upon males in economic life. Speech defects are also about twice as frequent among

colored persons as among whites. Statistics prove that stutterers are retarded in school *grade* about one half year, but not in school *achievement*.

Among the speech handicapped there are various national organizations. Perhaps the best known is the Kingsley Club (named for Charles Kingsley¹), restricted to "stammerers and ex-stammerers." Recently fifty of them addressed their society at its seventeenth anniversary banquet. There is also in existence the Lost Cord Society, whose membership is restricted to those who have had laryngectomies (removal of the larynx).

INCREASING PROVISION FOR TRAINING OF SCHOOL CHILDREN

Efforts to provide special training for school children with speech defects probably were first started in Potsdam, Germany, in 1886, whence the movement soon spread throughout that country.

A year previous, the beginning of corrective speech work as a public school problem had its origin in the United States in the schools of the deaf in Wisconsin. The development of speech for the deaf was the outstanding feature of the work of these schools. However, a child lacking speech from any cause or with any serious speech handicap came to them for help.

In 1912 the first department for speech defectives in the United States was opened in New York City public schools.

Mr. John F. Reigart, writing in the *Cyclopedia of Education* (1913), reported that Chicago, Detroit, and

¹ See page 92.

Milwaukee, as well as New York, had special classes for speech defectives in their public schools. The first public school system in America to establish speech correction on the basis of mental hygiene was organized in Grand Rapids, Michigan (1916), by Miss Pauline Camp.

In the biennial report of this school for 1916-1918 the following quotation appeared: "Children with speech defects were given some attention since early in the history of the day schools, but not until 1913 were children with defective speech allowed to enter on the same basis as deaf children. During 1918, 150 children with speech defects were enrolled for full time and 319 received part-time instruction."

In 1921, when Miss Camp was appointed supervisor of speech-correction work in Wisconsin, 521 children were receiving speech training.

Berlin, Paris, and Vienna, as well as New York, had clinics for the examination and treatment of speech defects, provision being made for treatment in several ways.

1. In boarding schools where the children live for some time; e.g., Dr. Martin's school in Ithaca — probably the best known of those in America.
2. In day schools; e.g., Manchester, England, a special school where children go for corrective work in speech.
3. In special classes, after hours, in many cities here and in Germany.
4. By special teachers of speech correction; e.g., in New York, Yonkers, etc.

Intensive speech-correction work and studies have been carried on in Massachusetts, Washington, Iowa, Minnesota, and Wisconsin. California (like Wisconsin) has had an organized speech-correction program for some years. Missouri is now establishing a similar program. Both these states supply state support for workers among the speech handicapped. In 1924, 3495 children were enrolled in these speech classes; in 1927 the enrollment had increased to 4807 in nineteen cities.

In 1929, in London, England, 311 children attended the centers for stammerers. The report is that 12 per cent were discharged as cured, 18 per cent as provisionally cured, and a number of others greatly improved.

A report of the United States Office of Education (Bulletin No. 7, 1931) noted that in 1931 some 84 school systems (in 22 states and the District of Columbia) were employing special speech-correction teachers. For cities with a population of 100,000 and over, which furnished data, 15 started speech-correction work in the years 1910-1919, and 15 more in the decade following. Of cities with a population of 30,000 to 100,000, three began such work in 1917-1919; 27 in the years between 1920 and 1931. Six smaller cities, with a population under 30,000, began their special speech work in the period 1920-1927.

In 1938, Dr. Letitia Raubicheck, Director of Speech improvement for New York City schools, reported that for 1937, out of 28,524 children treated for speech defects in New York City schools, 25,073 were discharged as corrected or improved. She also reported that lisp-

ing led all speech disorders — 13,245; stammering was treated in 3979 cases; 7714 children suffered from acute defective phonation. In this survey were only 238 schools, which employed 38 teachers for the remedial work.

The American Speech Correction Association was organized in New York City in December, 1925, at the convention of the National Association of Teachers of Speech, with which it has always been affiliated.

THE HISTORY OF PHONETICS

Hundreds of alphabets to represent speech sounds have been proposed, but the one that has come into most general use is that of the International Phonetics Association, a modification of the Broad Romic. This alphabet took form between 1885–1889 in the hands of Paul Passy, a French phonetician. Passy founded *Le Maître Phonétique* in 1889, an influential journal printed entirely in phonetic type. This alphabet holds an unrivaled place in language study.

The great movement in this field is known as the English school of phonetics. Its founder and leader, Henry Sweet (1845–1912), was born in London and later was educated in England and Germany. He was a profound and original thinker on the science of language in all its aspects. Without him there would be no International Phonetic alphabet, as it is known today. His *Handbook on Phonetics*, appearing in 1877, was one of the many publications in this field. Sweet made use of the Broad Romic symbols instead of

adapting those of the International Phonetic Alphabet which has come into general use since 1889.

The publication of Alexander Graham Bell's ¹*Visible Speech* in 1867 gave great impetus to the further investigation in the field of phonetics. One result of his work was a close study of the positions and actions of the organs of speech, especially the tongue and lips. Henry Sweet and others of the English school became interested in his investigations and helped perfect his alphabet.

As an outcome of these investigations and the progress they inspired, there developed a new science of speech. Its tenets and terminology have been adopted throughout the world, so that the English school of phonetics is the dominant influence today.

The International Phonetics Association was formed in 1884-1885 by "a small group of French teachers who had been successfully experimenting with using phonetic transcriptions in the practical teaching of English. They were probably inspired by the practices of Sweet and Passy. Since the society was concerned primarily with teaching English to French-speaking students, the society was called The Phonetic Association of Teachers of English. Its official publication, edited by Paul Passy, was called *The Phonetic Teacher*."² It appeared from 1886 to 1888, and published contributions in a variety of phonetic systems. Certain general principles were followed, but the alphabet used was vastly different from the one in use today. However, by 1889, as a result of conferences and decisions on

¹ See page 73.

² From *Le Maître Phonétique*, July-September, 1935.

the part of Passy, Henry Sweet, and others, a system was established which closely resembled the alphabet in present use.

Since the scope of the work of the Phonetic Teachers of English was really international, it was decided that after January, 1889, the society would be known as the Association Phonétique Internationale, and the journal as *Le Maître Phonétique*.

As early as 1890, the science of phonetics as practiced by Sweet was being applied to all problems of speech.

Several major improvements were made in the alphabet in 1892, as well as in 1893, 1899, and 1926.

At Copenhagen, in 1925, the conference of the society made a few important suggestions for the improvement of the alphabet.

Three significant facts concerning the phonetic alphabet and its acceptance by the literate world are pertinent to this discussion:

1. Its symbols are used in texts and periodicals without any explanation by the authors.
2. Many schools utilize it in teaching both the native and foreign languages; dictionaries have incorporated it.
3. Several of the symbols are being employed in the orthography introduced for various African languages.

At the meeting of the Congress in London on June 27, 1935, Daniel Jones, its secretary and an eminent British phonetician, asked that the society work toward the perfection of the alphabet and the continued growth of the movement. One sectional meeting was

devoted to the subject of "Speech Pathology and Speech Therapy."

The Third International Congress met in Ghent, Belgium, in July, 1938. Among the subjects treated, in addition to those of general linguistics, phonetics, and phonology, were those of the physiology and pathology of speech and voice.

Chapter Five

THE CRIPPLED ¹

THE problem of definition always complicates generalizations concerning the crippled, for crippling is a condition that varies in manifestation and duration, thus differing from blindness and deafness. The latter are more specific disabilities and are more likely to persist throughout life. The degree of crippling, the time of onset, the amount of apparency, the time of recognition, all classify and determine those who are known as orthopedic cases. Therefore it must be borne in mind that the crippled, as a group, is heterogeneous, not static.

The derivation of the term "crippled" is a complicating factor. The word seems to be of Teutonic origin; translated into English, it means to *creep*. The Sanskrit is *dhvaras*, and originally meant *dwarf*; it also could mean *evil one*. In translation all these terms have been used interchangeably. The amount of confusion that has resulted is difficult to estimate.

Certain crippling conditions are becoming more and more temporary, as medical science discovers improved ways of treatment. For example, a poliomyelitis case may be almost totally paralyzed at a given time; a few years hence the same individual may be practically normal.

Also the time of onset affects the relations of the physically handicapped individual to the social group. This has likely been true to some extent throughout the ages.

¹ By Miss Romaine Prior.

GENERAL HISTORICAL ATTITUDES

Certain social factors have always affected the status of the physically handicapped, even as they do today. For instance, the time of onset markedly affects the relations of the crippled to his social group. Prestige and power of family tend to influence and modify these relationships. Social standards, ideals, and practices create qualifying conditions to which the crippled must make an adjustment.

In spite of these and other qualifying conditions, the general attitude toward the crippled has been unfriendly. True, his relation to and his position in the social order have varied with the ages, but he has been, usually, a victim of the stage of civilization of which he was a part and of the various general social attitudes of the group in which he lived.

While these attitudes toward the crippled cannot always be marked off definitely according to historical periods, yet certain trends are strong enough to justify following the divisions set in this volume for a survey of attitudes toward all the handicapped.

The persistence of attitudes toward all deviates throughout primitive and ancient times is identical. Emphasis upon the philosophy of "survival of the fittest" marked the treatment of the crippled. Exposure, abandonment, and destruction were practiced to some extent in almost all nations.

The treatment accorded the maimed and the deformed during the Middle Ages was characterized by contempt and ridicule. During the time of the Renais-

sance and the Reformation — a period of awakening, and finally of religious change — some new elements were shown in regard to the crippled, but not the *hope* that one would like to find. Through this period the crippled was still an object of ridicule, amusement, and exploitation. The religious influence failed to bring him *rights* as an individual. In some instances it even tended to darken his future by surrounding him with suspicion and superstition.

The first real hope for the orthopedic appeared in the early eighteenth century, when medical science became interested in his plight. Throughout this entire century most of the interest was along medical lines. No general attempts were yet made to educate or train cripples for any occupation. Those which were made were individual and sporadic.

The modern period, embracing both the nineteenth and twentieth centuries, is characterized by a humane and a scientific interest in behalf of all the handicapped. Various trends, evolving since 1800, are evidenced to-day in our modern social program of educational, medical, and occupational rehabilitation.

PRACTICES IN PRIMITIVE AND ANCIENT TIMES

There were evidently two dominant attitudes among primitive people toward the crippled as there were toward all other classes of the handicapped. First, the desire to be free from the responsibility and care of a person who was not likely to be self-sustaining, and secondly, a shrinking or feeling of repulsion toward anyone who deviated from the normal. These reac-

tions seem to be typical of modern primitive peoples as well as those of ancient times. This indicates that the attitude of society toward its handicapped may be more related to the stage of social development than to its chronological date.

According to Douglas C. McMurtrie,¹ who has done considerable work on the history of the crippled, cruel practices were common among the Aztecs and among certain other Indian tribes living on the Pacific islands. Similar practices existed in early times in northern Germany and Japan, where there was little hope for the survival of the orthopedic case.

Furthermore, among certain more modern primitive tribes, any amount of deviation from the normal has never been acceptable. It is known that in certain localities in Africa, children with six fingers have been buried alive. In comparatively recent times, among some American Indian tribes, the same feelings have persisted. Not only have they destroyed their defective children, but it is said that they used merciless cruelty on other occasions.

No group of handicapped individuals has a more visible defect than the orthopedic, and for this reason they are likely to get the full measure of social disapproval.

It is evident that these early civilizations showed no consideration for unfortunate individuals, especially for the helpless young children. No doubt a great many of the less robust died in the natural course of events. There was certainly no place for frail individ-

¹ McMurtrie, D. C., "Early History of the Care and Treatment of Cripples," in *Johns Hopkins Bulletin*, 1914, Vol. 25, No. 276, page 58.

uals in a civilization which had to struggle for an existence.

Among the Babylonians there were laws concerning the welfare of children. Although no specific mention was made of the crippled, it is possible that they may have benefited from these.

The attitude of the Egyptians toward the crippled is not certain. According to some authorities, orthopedic children were destroyed as they had been in other civilizations. However, Cary T. Landis¹ assures one that the Egyptians were very kind to the handicapped.

In ancient India, crippled children were put in the Ganges. In Persia, evidence indicates that they were exposed and destroyed. Landis tells that the earliest known illustration of poliomyelitis is found in Nineveh, on an Assyrian tablet.

Japanese mythology implies that deformed infants were abandoned in earliest times, but it is not certain that this was the general practice.

CHANGED ATTITUDE OF THE HEBREWS

The attitude of the Hebrews seems to differ from that of their predecessors or contemporaries. The Jews, true to their philosophy, began very early in history to take care of *their own*. This implied some tendency toward social responsibility for the handicapped. The Hebrew race, however, was extremely sensitive to bodily imperfection and seemed to share the primitive fear of the unexplainable. This is especially evident in their restrictions on participation in

¹ Landis, Cary T., "Yesterday's Crippled Children," in *The Crippled Child*, August, 1936, Vol. 14, No. 2, page 41.

religious rites. The following Biblical references indicate the attitude toward people and toward sacrificial offerings for religious ceremonies.

In Leviticus XXI, 18-21, the Hebrew philosophy is expressed in the following words:

18. For whatsoever man he be that hath a blemish, he shall not approach: the blind man, or a lame, or he that hath a flat nose, or anything superfluous,
19. or a man that is broken-footed or broken-handed, or crookbacked, or a dwarf, or that hath a blemish in his eye, or is scurvy, or scabbed, or hath his bones broken;
21. no man of the seed of Aaron, the priest, that hath a blemish, shall come nigh to offer the offerings of Jehovah made by fire: he hath a blemish; he shall not come nigh to offer the bread of his God.

In Leviticus XXII, 19-22, the same attitude is portrayed concerning the sacrificial gift.

19. that ye may be accepted, ye shall offer a male without blemish, of the bullocks, of the sheep, or of the goats.
20. But whatsoever hath a blemish, that shall ye not offer: for it shall not be acceptable for you.
22. Blind, or broken, or maimed, or having a wen, or scurvy, or scabbed, ye shall not offer these unto Jehovah nor make an offering by fire of them upon the altar unto Jehovah.

No lame, crookbacked, or otherwise orthopedic case was allowed to enter the priesthood. If a priest became crippled, he was no longer allowed to officiate, although he was still a recipient of holy things.

One of the early Hebrew descriptions of an orthopedic case is that of Jonathan's son, who was reported to be lame as the result of a fall. The Bible says that the child fell from his nurse's arms and was lame ever

afterward. This unfortunate one, of course, was not destroyed, but was cared for. Just what his fate might have been had he belonged to a less powerful family is hard to determine. Also, one wonders whether the diagnosis of the cause of his lameness was absolutely true, or if it was but a rationalization. Even today it is very common to blame any disability on a fever, a fall, or an unrelated accident.

IN ANCIENT GREECE AND ROME

The ancient Greeks prized physical perfection; the Athenians worshiped beauty; the Spartans admired physical prowess. It is therefore very easy to understand why they destroyed, exposed, or deserted orthopedic children. Sparta had a law providing for the destruction of the crippled, but in spite of this there were exceptions, even in Greece. There were some notable cripples — e.g., Aesop — who escaped destruction. Therefore he had had opportunity to become a member of the society in which he lived. Pittakos, a king of Athens, described as lame, was another exception to Greek law. However, generally speaking, the Athenians commonly allowed crippled children to die of cold and neglect.

There was more leniency shown in the attitude of the Romans, and it indicated what may be considered rather conflicting beliefs. This difference in trend may have forecast a change in social attitude.

The Roman period was characterized by two outstanding practices: (1) Destruction, exposure, and abandonment, which were certainly practiced. The Law of the Twelve Tables allowed the parent to decide

whether he wished the child to be destroyed. Such children were thrown into sewers, drowned in lakes, left in the woods, in the streets, or in public places. In writing of the destruction of these children, McMurtrie¹ says that they were left "ironically enough in the very vicinity of the Temple of Mercy." (2) Exploitation was present in different forms, and was very prevalent in the Roman period. Cripples, dwarfs, and otherwise physically deformed persons were very popular for amusement and as jesters or entertainers in the courts. History reports that many normal children were bandaged in an attempt to make dwarfs of them; also that other normal persons were intentionally mutilated. As has been noted elsewhere, slave dwarfs were in demand in the Roman slave markets, where they brought greater prices than physically "normal" slaves. Seneca, the Roman philosopher, countenanced this form of exploitation, but he objected strenuously to the profits that normal individuals made by using the deformed as beggars. This attitude of Seneca's introduces one of the other forms of exploitation which was common among the Romans, and that was begging. Not only were the crippled slaves allowed to beg, but they were exploited by normal persons who made it a regular business to collect their profits. It is said that many crippled individuals were objects of punishment if their returns were not adequate.

EARLY CHRISTIAN ATTITUDES

Although Christianity introduced a new and a more mellow philosophy toward all mankind, it did not help

¹ McMurtrie, *op. cit.*, page 59.

the physically handicapped as much as one might expect. The New Testament reflects differing attitudes and emotions toward the crippled. There is a great emphasis upon the miraculous, but no conception of including the physically unfit in the social group.

Evidence that the crippled were not a part of the social group is strong in the following quotation (Luke XIV, 13-21): "But when thou makest a feast, bid the poor, the maimed, the lame, the blind: . . . And thou shalt be blessed; because they have not wherewith to recompense thee: . . . and bring in hither the poor and maimed and blind and lame."

From the time of the Twelve Tables in the Roman period to the twelfth century there seems to be evidence of only one instance of public provision for the crippled. In 590 A.D., Pope Gregory included the crippled among other unfortunates who were to be provided with public money.

PRACTICES IN THE MIDDLE AGES

The Middle Ages were characterized by ridicule and contempt for the crippled. Practically the only occupation for the orthopedic handicapped person was that of court jester. In England, in 1233, Courts of Chancery undertook some welfare jurisdiction over unfortunate children in general. It may be that crippled children were included in this group.

According to A. Wojciechowski,¹ Poland, very early in its history, manifested a humane interest in the

¹ Wojciechowski, A., "How Poland Cares for Its Cripples," in *The Crippled Child*, October, 1937; page 80.

crippled. He claims that in 1250 Poland had a home for the crippled, maintained under the jurisdiction of religious fraternities. This interest in the orthopedic has persisted to the present time, but the real service rendered by the Polish has not been continuous because of their intermittent political history.

BEGINNING OF THE MODERN PERIOD

THE RENAISSANCE AND THE REFORMATION

This was a period of general awakening, but the plight of the crippled was not much improved or ameliorated. He continued to be a court jester, or to be the object of amusement and ridicule, not only in life, but also in literature and upon the stage.

Many of the characters of Shakespeare dramatize that this idea of amusement over deviation was very acceptable to Elizabethan England. Caliban, the monster of *The Tempest*, exemplifies this attitude.

In spite of these general tendencies toward ridicule, there was some awakening along general lines in England. Under Henry VIII, the English law of 1530 concerning the punishment of beggars and vagabonds made distinction between the impotent and the physically normal. Under Edward VI, provision was made to collect alms for the poor.

These early legal steps foreshadowed the general English policy of including the crippled in provisions for general welfare. Much of the legislation which has aided the orthopedic to the present time has been part and parcel of the welfare movements to relieve chil-

dren, factory workers, and the poor in general. In 1601 the Poor Relief Law under Queen Elizabeth classified cripples as social dependents.

In France, history records that Francis I (1494-1547) had a woman of Aveyron put to death because she had given birth to a deformed child.¹

In Germany, during the sixteenth century, many decrees were passed by the Reichstag as a protest against the exploitation of the personalities of orthopedic cripples. Although the decrees were not effective, and were perhaps little more than a gesture, they showed that there was evidence of an awakening public conscience and agitation concerning the fate of the handicapped.

The religious reformation of the Renaissance reflects a strong undercurrent of aversion to and superstition concerning the physically handicapped. The belief persisted that there must be some connection between an evil mind and an evil body; also that physical imperfection might be an evidence of the wrath of God. Both educated and uneducated shared this belief.

Martin Luther believed in the theory of changelings, among whom he classified cripples, cretins, etc. Various translators indicate that Luther considered deformed children simply as masses of flesh unfit to live and that he believed God would be pleased to have them destroyed. However, this attitude was not without objection, even though there was insufficient public interest to change the destiny of unfortunate orthopedic cases.

¹ McMurtrie, *op. cit.*, page 60.

EIGHTEENTH-CENTURY PRACTICES

The eighteenth century marked the beginning of modern trends and was characterized chiefly by a medical interest in the crippled.

In 1722 Luitgard of Baden provided a hospital for the wretched to which the crippled were eligible. In 1744 Audry of Paris wrote two volumes on orthopedics. This apparently marked the first medical interest since the time of Hippocrates.

THE MODERN ATTITUDE

The modern period, including both the nineteenth and twentieth centuries, is marked as a time of great development and growth in the care of orthopedic cases. The nineteenth century in America and Great Britain, and probably in many other countries, is characterized by an attitude of sentiment, philanthropy, and charity. This sentimental appeal was very important in arousing public opinion and in stimulating the interest of laymen in favor of the handicapped. Medical men, however, were more scientific in their approach. Experimentation and research were co-agents of progress.

The American period, even up to 1914, was largely characterized by home, asylum, institutional, and hospital care for the crippled. In Germany the problem was almost entirely handled in homes or institutions. As indicated, the nineteenth century was a time of pioneering and local attempts to do something constructive for the crippled.

The twentieth century is marked by a slightly different social attitude. People have begun to realize that many cripples in the world can be rehabilitated and returned to normal living in their social group. Through the twentieth century the point of view assumes a much more truly social significance than at any time in history.

IN ENGLAND

Marked similarity exists between the progress of the medical program initiated both in the United States and in England. This close collaboration seems to have existed even before the outbreak of the World War. Orthopedic doctors of both countries traveled back and forth to observe and compare methods of correction and treatment.

Outstanding among English physicians in this pioneer work were Doctors Percival Pott (1714-1788), Hugh Owen Thomas (1834-1891), and Sir Robert Jones. Among leaders in America were Doctors Robert B. Osgood and Robert W. Lovett.

The emphasis in their interest in the crippled was *medical*. That was to be expected, as the apparent need was for adjustment and treatment of physical deformity.

Two marked differences were apparent in the organization of a medical program in the two countries. In England, open-air and tubercular children were classified with the orthopedics, while in this country they were grouped as a separate entity. The second difference, foreshadowed all during the course of history, was the attitude toward the crippled regarding child and

welfare movements. From the time of the English Poor Law (1601) to the present, crippled needs have been considered under housing acts, and factory and general health laws. In the United States the movement was more specific for crippled children as such; it did not come under any Federal law until 1935.

Institutional care for the crippled child was not begun in England. In 1907 a law was passed regulating school medical services. This was a general welfare enactment; but we think now it was an attempt to improve the lot of the crippled. In 1911 the Finance Act was passed, which allowed for sanatorium care for the crippled. In 1912 a study concerning cripples in the city of Birmingham was published. The purpose of this study was to classify the cripples of Birmingham and to state the needs in relation to the possibilities of the different classifications. For example, one problem was to find out how many adult cripples would be able to work and how many would not. Another problem was to discover the number of cripples under the age of sixteen and to classify them as to the number of boys and the number of girls in the area. This study was an attempt to find out what service such a city would need in providing for the occupational problems of the crippled.

The outbreak of the World War disrupted plans for further study and investigation along these lines. That some constructive legislation was carried forward even during the war is evidenced by legislation enacted in 1918 and 1919. Birmingham passed the Education Bill in 1918, while Sir Robert Jones and Girdlestone published in 1919 *The National Scheme for Cripples*.

About this time, too, influence was brought to bear on the board of education so that a compulsory class was provided for crippled children. A result of these movements was the development of the Central Committee for the Care of Cripples, which has since changed its name to the Central Council for the Care of Cripples. This Central Council was in reality a merger of the General Parliamentary Advisory Council and the Invalid Children's Aid Society. Its purpose is to promote facilities for treatment and rehabilitation (which means elementary education, vocational training, employment, and placement) and general welfare. The purpose of this committee was to convince the public of the general need for orthopedic welfare. Leaders throughout this movement were Sir Robert Jones, Dame Agnes Hunt, Girdlestone, Mrs. Humphry Ward, and others.

IN GERMANY

In Germany the philosophy concerning the handicapped has apparently been a little different. Through the nineteenth century there seems to have been less sentiment concerning the crippled and more interest in his rehabilitation for reasons of human economy. It appears that the Germans wanted to restore the physically handicapped so that they could be contributing members of society. Furthermore, the trend in Germany has been definitely toward orthopedic institutions, or *Heims*, which provided medical care, occupational training, and some form of academic education.

In Germany the first attempt at education was under

the auspices of the Kurtz Foundation of Munich, in 1832. This later was subsidized by the government and therefore in 1844 became the first example of education of the crippled, at public expense. The Munich institution was a model for the other German *Heims*.

Later, other schools patterned after the Munich school were established in Baden (1879) and an industrial school for crippled children in Gothenburg in 1885. The Mecklenburg school was founded in 1900. Some phases of the work were included at Nowawes, near Potsdam (1886).

Germany and Austria both carried on most of their orthopedic programs of education through the medium of hospitalization. In both countries there are respectively 114 and 12 hospitals for crippled children, and more than 80 of these have schools or some form of educational training.

The following institutions or homes for crippled are outstanding: the Munich School, established in 1832; the Oscar Helene Heim at Bahlem, a suburb of Berlin, which has both the medical and educational program. This latter institution was founded in 1906 under the auspices of the Crippled Welfare Association. In 1913 a Catholic home was opened in Merhem, a suburb of Cologne, which provides extensive vocational training both for boys and girls. Heidelberg has an orthopedic institution in connection with the University of Heidelberg. This came into existence in 1922. Leipzig boasts of two institutions, the Orthopedic University Clinic and the Home for Crippled Children called the Humanitas. Recklingshausen has an institution with emphasis chiefly upon bone and joint tubercu-

losis but in which some educational work is done. Other cities such as Sulten and Volm also established educational programs based on modern orthopedic work.

IN SCANDINAVIAN COUNTRIES

In the Scandinavian countries the great emphasis has been upon craft and vocational education. This, of course, is typical of the Scandinavian educational program for normal children. In 1872, in Copenhagen, a school was opened which is considered by many to be a model, not only for the education of crippled children, but also for crippled men and women. This institution provides a widely diverse program, consisting of workroom classes for manual work, a children's school in which rudimentary branches and musical training are provided, a clinic, a dormitory, and a recreation home at the seaside. In Stockholm the Eugenia Hemmet School, opened in 1879, stresses general education rather than trade, and admits both adults and children. In 1892 the Society in Aid of the Deformed and Infirm opened an industrial school.

In Sweden special teachers are trained by the school board to teach crippled children after school hours. In 1892 Sophie Minde in Christiania was established for providing manual training even for extreme cases.

IN OTHER EUROPEAN COUNTRIES

According to Wojciechowski,¹ considerable medical interest was revived in Poland in the nineteenth cen-

¹ Wojciechowski, A., "How Poland Cares for Its Cripples," in *The Crippled Child*, October, 1937; Vol. XV, No. 3, pages 79-81.

ture. He reports that Drobnik proposed plastic operations on tendons in cases of muscle palsy. Professor Wierzejewski was a pioneer in the field of orthopedic medicine and was the first director of a great private orthopedic institution in Poznan, Poland, known as the Gasiorowski Memorial Hospital in Poznan. In Warsaw there is also maintained an up-to-date orthopedic ward.

France, Italy, and Switzerland each carried on programs of general educational and vocational training for their handicapped quite similar to the work done in other progressive countries of Europe.

The rapid development of these different programs of training and rehabilitation in every part of the civilized world was due to two factors: a changing point of view regarding public responsibility for the care of the crippled, and urgent needs of the time to combat the evils of an untrained, disorganized group of economically dependent citizens.

HOSPITAL AND INSTITUTIONAL CARE IN THE UNITED STATES

As early as 1839, Dr. John Paul Brown opened a private hospital for the treatment of orthopedic cases. His son, Buckminster Brown, is reputed to have been the first orthopedic surgeon in the United States. In 1861 Dr. Brown opened a ward for orthopedics in Boston.

The same year Dr. James Knight and his daughter pioneered in a movement in New York City, which developed into the establishment of the Hospital for the

Ruptured and Crippled, which now fronts on East 42d Street. This was established in 1863, and may be considered the first real hospital for the orthopedic in this country. In 1866 the New York Orthopedic Hospital and Dispensary on 59th Street was opened.

Medical science was attempting to find ways of making the orthopedic normal. Private enterprises were pioneering, and laymen were beginning to take a healthy interest in the problems of the crippled. This was to lead to considerable development through organization work in the early part of the twentieth century.

The decade 1880 to 1890 was marked by the establishment of several organizations which definitely advanced the progress of scientific work. Among these were: The Home of the Merciful Saviour, Philadelphia; the Visiting Guild for Crippled Children, sponsored by the Ethical Culture Society of New York City; the Children's Aid Society of New York City, which provided schools with orthopedic apparatus and attendants and also furnished lunches and transportation for orthopedic children; and the Rhinelander School for Crippled Children, a private school.

The year 1897 marks the beginning of the state institutional trend which became somewhat dominant in America for the next two decades. The purpose of such institutions was to provide a home which would give a medical program and custodial care. Early in the twentieth century some attempt was made to introduce an educational program in such organizations. The first institution of this kind was opened in 1897 in St. Paul, Minnesota.

INDIVIDUAL AND ORGANIZED EFFORTS

The interest in the crippled in the early part of the century tended to grow up around some dominating personality who sponsored some philanthropic activity or who worked in behalf of physically handicapped children. Such a man was the late "Daddy" Allen, the founder of the International Society for Crippled Children. Through a personal experience he became interested in the welfare of these children, and he devoted his time, leadership, and influence to their care.

Other organizations, either voluntary or affiliated with other social or state agencies, recognized the needs of orthopedic children and joined in the general movement to lend their support in furthering a program of rehabilitation.

The function of these organizations has varied in different localities, according to the needs of the proposed programs and the available facilities for meeting them. In some states clubs undertook to spread propaganda in order to arouse interest and enthusiasm; in others, specific agencies have initiated and carried on extensive service programs of education and training.

According to the White House Conference Report, these organizations have been the greatest single influence in the promotion of work for the crippled in the United States. Their purpose generally has been to arouse the public in order to get problems before parents and service agencies, and to sponsor and protect legislation for such handicapped individuals.

Generally speaking, the influence of club members has been more effective than that of parents, teachers

and social workers. The reason is probably that they have no personal interest at stake and can thus deal more impartially with individuals. Likewise they are generally more accustomed to dealing with matters of public importance and legislative reform.

Several national and international organizations have pledged support to programs of general welfare.

One of the leaders in this movement has been the Rotary International, which renders help to and maintains a broad interest in all crippled persons.

In certain parts of the country the Elks have been very active in such work. According to the White House Conference Report this is especially true in New York, New Jersey, Illinois, Washington, and Pennsylvania. The Kiwanis group, in designated localities, has aided this program by contributing financial and social aid. The American Legion has also financed, through its national and local funds, studies concerning the condition of crippled children. Anyone familiar with orthopedic medical practice knows about the extensive work being done in the Shriners' hospitals scattered throughout the United States. The Junior League has cheered and aided many homebound children and has rendered a real service in the marketing of the handiwork of the homebound. The influence of the Rotary has been especially constructive in its work in New York, Ohio, and Michigan.

Local interest in the crippled culminated in the previously mentioned International Society for Crippled Children. This society has furthered the development of state organization, so that now each state has some official organization interested in the orthopedic. It

has also fostered and extended its influence into conventions of national and international order. *The Crippled Child* is the official publication of this society.

The International Society for Crippled Children has become a correlating agency for all organizations and individuals interested in this cause. The records of the International Society now show that every state in the Union has some affiliated organization working in behalf of the crippled. These groups naturally vary as to original purpose and responsibility. From some comes literature, to arouse the public to pertinent needs. In other states, with longer and more fully developed medical programs, literature of the reporting and research type is published. For example, Michigan now has legislation and public opinion so well established that they have probably passed the time that might be called the propaganda stage. The work of voluntary organizations has paved the way for more adequate medical programs and expansion of educational opportunities.

PROGRESS OF THE MODERN MEDICAL PROGRAM

The twentieth century is distinguished also by marked progress in the advance of science as an aid to orthopedics. This is shown in several pronounced trends which found their origins in dominant and related forces at work both in the United States and abroad. This new emphasis upon medical, educational, and occupational rehabilitation reflects a new point of view both with the specialist and with the layman.

Progress in the program is due also, in part, to the following factors:

1. New ways for discovering the crippled through various means.
2. The leadership of individuals who have furnished inspiration and who have spread a wholesome type of propaganda.
3. The united efforts of voluntary organizations and service clubs to work for the benefit of the crippled.
4. Progress of medical research, skill in surgery, and treatment.
5. Legislation growing from discussions at local, state, national, and international conferences and conventions.
6. The success of pioneer attempts in orthopedic medicine, education, and rehabilitation.
7. The new program of safety education and prevention.

Parallel developments which tend to facilitate this progress are: improved means for census-taking and enumeration, clarification of definition, informed legislation, guidance and successful experimentation in education, medical and social service, and rehabilitation.

The medical history of crippling conditions shows some of the results of medical science in the current century. Following is a table which shows the distribution of crippling conditions in 1914, 1924, 1930, and 1938, according to national surveys.

YEAR→	1914	1924	1930	1938
Cause:	%	%	%	(rank order)
Poliomyelitis ..	24.3 (2) ¹	27.26 (1) ¹	33.7 (1) ¹	(1) ¹
Congenital de- formation ..	9.8 (4)	13.15 (3)	10.0 (4)	(2)
Birth injuries..	3.5 (6)		14.0 (3)	(3)
Accidents	3.5 (7)		16.0 (6)	(4)
Rickets	10.1 (3)	8.05 (4)	...	(5)
Osteomyelitis ..	...	3.67 (6)	...	(6)
Bone and joint tuberculosis..	39.5 (1)	23.65 (2)	12.6 (2)	(7)
Apoplexy	4.6 (5)		...	...
Scoliosis	1.8 (8)		...	...
Scattering	2.9	20.20	16.0	...
Traumatic con- dition	...	4.20 (5)	...	...
Cardiac	...		8.0 (5)	...

¹ Rank order of frequency of disease or cause.

The figures published in the Report of the White House Conference indicate the following order and frequency of crippling condition (see also under 1930 in preceding table):

CAUSE	PERCENTAGE
Infantile paralysis	33.7
Bone tuberculosis	12.6
Spastic paralysis	14
Congenital	10
Cardiac	8
Accident	6
Other	16

The figures quoted previously are taken from the important surveys that have been made during the century. At a glance they show the decline in tuberculosis of the bone and the great increase in the recorded

number of cerebral palsy cases. There are many things of a medical nature that are still not apparent in these surveys. The advances due to treatment and surgery could not be reflected in a table of this kind, but anyone who has been dealing with orthopedic cases for a number of years realizes how much medical science can now do for them. An example of this progress is shown in the advance being made in treating poliomyelitis. In other words, medical men are learning more and more how to deal successfully with many conditions that used to make hopeless cripples of individuals. Some of this progress is just beginning to be shown in the treating of the large class of cerebral palsy cases, which are beginning only now to be understood by medical men. According to Dr. Winthrop Phelps of Baltimore, the cerebral palsy group will probably be the future focal point of interest in the crippled group. It is possible that other types of crippled will become more scarce, due to the efforts of medical science and to the discovery of cerebral palsy cases.

The Social Security Law of 1935 has placed its greatest emphasis for the crippled child upon the medical program. Under this law substantial sums of money are allotted to states on the matched basis. According to the most recent publication (1938) from the United States Department of Labor on facts about crippled children, the following statement is challenging: "The registers of crippled children in 36 states, Alaska, and Hawaii on June 30, 1937, included the names of 99,722 crippled children. . . . Federal aid to the states for services for crippled children authorized in the Social Security Act (August 14, 1935) has made possible the

development of a nation-wide program of medical, surgical, and aftercare service for the physical restoration and social readjustment of crippled children."

The foregoing quotations indicate that tremendous strides have been made since this law was passed. During the same period equal progress has been made also in the medical program. It is nation-wide and attempts to give health facilities that are needed. To date, no Federal plan has been approved for the education of crippled children on a nation-wide scale. The Pepper Bill, which is pending, would underwrite a national educational program for these children.

One cannot leave the discussion of medical problems without considering the medical services maintained in connection with public schools. Special classes usually have access to the services of an orthopedic doctor, special nurses, and a physiotherapist. In other localities, where a complete orthopedic medical program is not maintained in a special school, children are cared for in hospital clinics. Although the rural program has not been solved for the nation at large, still some states are serving these handicapped children by local clinics in which doctors attend at stated times.

MODERN EDUCATIONAL PROVISIONS

The following data give some idea of the number of crippled children enrolled either in public schools or special schools and classes.

1914	1924	1929	RECENT SURVEYS
3269	6225	13,283	19,000-25,000

The White House Conference estimated that there were about 300,000 crippled children in the United States, of whom about 100,000 had the advantages of special education. If 19,000 to 25,000 (data above) are receiving special education, it is obvious that only 20 to 25 per cent of those who need special training are receiving it.

Just before the turn of the century, the first public school class in America was opened in Chicago in 1899. This was the first class for the crippled to be operated by a board of education and to be supported by funds from the schools, and to be furnished transportation, material, and equipment by the public school system.

SCHOOLS AND CLASSES

The supervision of schools and classes for the crippled in public school systems varies, because it is usually related to personal interest and problems. For example, it may be administered under the direct attention of school officials or under a director of special education. Sometimes the supervision is a function of the attendance department. Large cities have tended toward organizing special schools or semi-special schools for orthopedic cases, often located near hospitals or on large tracts of land, and having a wide range of equipment and programs from simple to institutional. In this classification the term "special school" means a school for crippled only. The semi-special school means one that is organized for children with multi-handicaps. It may refer to a building that houses both normal and handicapped children. A few cities

care for these children in units within a regular school. A notable example of this type is New York City.

Special schools that house crippled pupils, sometimes in association with normal children and sometimes in association with other types of the handicapped, include the William S. Baer School in Baltimore, the A. Harry Moore School in Jersey City, the Dowling School in Minneapolis, the Day School for Crippled Children in Buffalo, the Spalding School in Chicago, the Percy M. Hughes School in Syracuse, the Branch Brook School in Newark, the Martin School in Philadelphia, the Third Street School in Columbus, the Sunbeam School in Cleveland, and others where, in many instances, unusual equipment and services are provided.

The means of and facilities for financing special schools is an obstacle in promoting their growth. Some states have appropriated sufficient subsidy for their maintenance and for paying higher salaries to teachers of crippled children. In some states a considerable portion of the financial burden is borne by the state, the remainder being provided by local communities. The requirements governing state subsidies change from year to year, so that it is difficult to generalize about a satisfactory program or the expectation of financial support.

THE MULTIGRADE CLASS

Many small cities are solving the problem by establishing a single multigrade class in a regular school.

The increasing demand for educational facilities for groups of children in cities and towns has made the multigrade class very popular. This can exist in one

or two rooms in a school for normal children. Special equipment and special housing facilities can be provided. Arrangement must be made for lunches, wheel chairs, transportation, etc., when a class is housed in such a building. Usually an adjoining room is fitted up for physiotherapy. Oftentimes the multigrade class is the nucleus around which a more complete unit for the physically handicapped can later develop. It is not uncommon for a city to begin with one class, which, when it becomes inadequate, may be expanded to serve the needs of three or four classes. It is often difficult to judge the local needs until the class is established. Any of the above-mentioned types of organization are usually staffed from the public school personnel. These persons supervise the teaching, act as advisers, and make adjustments to the medical staff. An ideal special school or a large unit within a normal school may have its own medical staff and program, but make use of all other facilities and officers of the public school system of which it is a part.

OTHER TYPES OF PUBLIC SCHOOL EDUCATION

Other situations in which the public school education is maintained are hospitals, convalescent homes, and individual homes. In the latter situations, children are usually more seriously crippled and are, therefore, more dependent upon adult aid. The supervision in such cases is usually medical rather than educational.

In hospital classes, the routine of management is under hospital direction, which also regulates the

amount of time a child may participate in class work and the kind and amount of work he may do.

In convalescent homes, the form of administration may vary, but the health program is dominant.

The teaching of homebound children requires still a different kind of supervision. It may vary from purely medical, in extreme cases, to a combination of medical and educational directed by both the medical and the educational staff.

TEACHER TRAINING

Until very recently there has been but little provision for teacher training in the field of special education, nor have specific requirements for special teacher education and certification been proposed.

The Michigan State Normal College at Ypsilanti was the first teachers' college to offer courses for this type of teacher training. Illinois, Michigan, Minnesota, New York, California, and Pennsylvania have outlined definite requirements for certification of teachers of the handicapped. It is the general policy, however, that those who desire to qualify as teachers of the handicapped must have had successful teaching experience with normal children. California has just completed a plan in which specific standards for teachers are set forth.

LEGISLATION

Nothing could be more indicative of the general interest in crippled children than the legislative acts passed in many states since the beginning of the twentieth century. During the first three decades,

more than one hundred laws were enacted favoring crippled children. *The Digest of Legislation for the Education of Crippled Children* (1929) summarized state educational legislation. The directory of The International Society for Crippled Children (1935-1936) published an abstract of legislative enactments in various states.

The following trends are noticed in reviewing the laws passed so far during this century:

1. To provide for medical care.
2. To authorize an educational program and, in a few states, to make it mandatory.

The Massachusetts and Minnesota laws illustrate these trends. The Massachusetts law of 1904 permitted education but did not attempt to establish any general state program. The Minnesota law of 1907 followed the establishment of the Minnesota State Institution in 1897. It likewise authorized the state to provide education, probably in view of the need at the institution.

No state-wide program was launched previous to 1917. In 1913 Michigan provided for free treatment for crippled children in the University Hospital at Ann Arbor. In 1917 both Ohio and New York passed state laws to provide for the education of the crippled generally and placed responsibility for so doing upon local boards of education. Later more specific provisions for state aid were arranged. These laws are very significant, as they marked the beginning of a trend away from institutionalization. (It is to be remem-

bered that during the first decade of the twentieth century care was largely confined to hospitals, convalescent homes, and asylums.)

Other legislation of the second and third decades supported local medical and educational programs for the crippled child. In 1921 Ohio passed forward-looking regulations for the education of both crippled children and adults. The state coöperated with local boards of education, paying the excess costs of the education of crippled children up to the amount of \$300 for educational expenses. The supervision of the work is in charge of a director in the State Department of Education.

The preface to the Bulletin, *The Education of and Care of Physically Handicapped Children* by Joseph Endres of New York, indicates the following high points in New York State legislation: "The laws enacted providing for the physical care, education, and general welfare of the thousands of physically handicapped . . . guarantee to every such child the best medical attention and good general education and training for useful service. This task now becomes a public trust as well as a public responsibility. . . . The legislature has wisely placed the major responsibility for this work upon local public agencies."

Legislation in most progressive states is usually concerned with state subsidy for:

1. Special services, such as transportation, lunches, physical therapy, and medical program.
2. Equipment and school facilities.
3. Teacher salary differentials, and qualifications.

American laws regulating the education of children require "all of the children of all of the people" to attend school. In the face of this mandate, what could the crippled child do? If there was no provision for his special educational needs, he could not benefit by the law. Before the opening of the twentieth century, no such concept of his rights prevailed; so educational opportunity was denied him. Today, public responsibility for the education of all handicapped children is a public obligation.

CURRENT CONCEPTS

The current American belief regarding crippled children is that they are entitled to all the opportunities by which they can profit. This concept involves a great public responsibility. It means that there must be not only academic training for the orthopedic child, but such services as will help to rehabilitate him and put him back into society as a community member, wherever possible.

Any good curriculum for crippled children will be built on the principle of individualization and flexibility. These are principles to be used in any life situation for any individual, but they must be even more stressed with children whose handicaps are of the motor nature. This is true because of the heterogeneous nature of the group, and because the medical program calls for many personal adjustments. The educational program should be adapted and timed to fit the individual needs of the children.

While great progress has been made during the nineteenth and twentieth centuries in behalf of the crippled

child, the task is not yet completed. Experimentation and research must go forward, hand in hand, to improve educational and medical facilities and care. Such services as have been started must be extended to all crippled children. Guidance and vocational programs must be further developed. A new type of teacher is needed if this challenging work is to be carried on intelligently and constructively. And above all other needs are the coördinated effort and endeavor of all those who work with the crippled child.

Chapter Six

THE UNDERVITALIZED, TUBERCULAR, AND CARDIAC

WITHIN the large and somewhat diversified subgroup of the physically handicapped which has been identified as composed of those whose handicap results in some motor disability or limitation,¹ it is best for the present discussion to consider together the undervitalized, the tubercular, and the cardiac. In many ways the programs resemble those for the crippled.

While there have been changes and differences of opinion with new developments in medical science, one common educational practice has characterized the treatment of these three types of handicapped; namely, a program emphasizing fresh air. The relatively brief history of this type of educational program has been an uneven one. At present these projects are still under critical analysis.

THE OPEN-AIR SCHOOL

The open-air school, by whatever name it is known, is a sanatorium, a playground, and a schoolroom combined. The prime essentials are fresh air, warm clothing, and good food.

It has been felt that, since healthful ventilation is obviously of primary importance, the recent improvements in air conditioning have made fresh-air rooms unnecessary. However, it is denied nowhere that, for certain types of children, the fresh-air régime, with em-

¹ See page 1.

phasis upon good ventilation rather than open air, has distinct advantages.

Interest in the fresh-air class for the tuberculosis case and the cardiac is logical. Historically, much value has been received by phthisis cases and other types of the tuberculous from fresh air and rest. Likewise the modern treatment of heart disease in children consists of rest, attention to diet, small meals, and care of the gastro-intestinal tract. In both types of cases it is important that the individual should learn to take a philosophical attitude toward the condition.

IN EUROPE

Historically, the fresh-air class dates back to an Open-Air Recovery School begun, in 1904, in Charlottenburg, a suburb of Berlin. Here, physically debilitated children attended school for half-day sessions and were given instruction, as well as an opportunity to recover their health. Educational success claimed for the project was based on the record that, despite the shortened school day, physically debilitated children did not fall behind in scholastic progress. This claim has been made more or less consistently for many types of special classes dealing with the undervitalized. The Berlin set-up was expanded, and the idea spread rapidly to other towns in Germany.

The Waldschule or forest school at Charlottenburg admitted children with lung trouble, heart disease, anemia, and scrofula—children not sick enough to be put in a hospital, but still too weak to keep pace with the normals.

One important factor in the success of the German

plan was the splendid system of medical inspection carried on in the regular schools. The school itself had a fine health program, and proper facilities and personnel for carrying it out.

The immediate success of the program led to open-air schools becoming an integral part of the German elementary school system. The schools were invariably located in the midst of woods and fields outside the cities, a practice not always followed in establishing fresh-air classes in this country.

England rapidly followed Germany's leadership. In 1907, in London, on a piece of land adjoining Bostall Woods, the first English class was opened, followed by three more in London the next year. The objectives of the English school were: (1) physical benefit to the children, and (2) prevention of any educational loss to them. The children included cases which were generally debilitated, or recovering from some operation, or who suffered from anemia, glandular enlargements (lymph node), bronchial trouble, incipient tuberculosis, heart disease, chorea (St. Vitus's Dance), and nervousness. The program closely followed the German procedures.

In 1908 the school was transferred to Shooters Hill, Woolwich, which was considered a better site. As in the German school, manual work, nature study, and gardening were important parts of the curriculum.

In addition to the day open-air schools described above, other forms of open-air education in England included country holiday schools, playground classes, open-air classrooms, and residential open-air schools.

Scotland also developed programs along parallel

lines. Ireland was unable to carry out so ambitious a program, because the surroundings of the schools were not suitable, nor was there such thorough medical inspection as existed in England and Scotland.

Similar programs were inaugurated in Italy, Switzerland, France, Denmark, Norway, Sweden, Holland, and Austria-Hungary. In no case did they cover the entire service constituting the English set-up.

IN CANADA

In Canada, the first open-air school was erected in 1910 on the ground of the Hospital for Sick Children at Toronto Island. It was known as the Heather Club Pavilion for Tuberculous Children. In the same year a preventorium and outdoor school was opened in a new building erected especially for the purpose on the grounds of the Mountain Sanatorium, Hamilton, Ontario. In 1912 an open-air school was established in connection with the Royal Edward Institute at Montreal. These and other schools were definitely associated with the hospitals. However, in May, 1913, the First Forest School in Canada was opened by the Toronto Board of Education at Victoria Park; in July a second school was opened in High Park. These schools were planned for recovered cases of tuberculosis, contact cases, children with hereditary tendencies, and those who were anemic, ill nourished, or with poor home conditions. Excellent results were shown from a Charlottenburg type of program.

IN THE UNITED STATES

In the United States the first open-air school was established in Providence, Rhode Island, in 1908.

From the first the work was definitely in coöperation with the anti-tuberculosis organizations. To serve its purpose, an old schoolhouse in the center of the city was remodeled. However, this type of set-up offered fewer chances for informal teaching and desirable deviations from ordinary school methods than the German and English schools. This, perhaps, is the greatest criticism of American programs as ordinarily found. It may explain, in a sense, the present status of these projects, which is by no means a wholly favorable one.

In Boston, in 1908, was established the first outdoor school (as compared with open-air schools) in this country. This was in the form of a camp, known as the School of Outdoor Life, on Parker Hill, Roxbury, established and maintained by the local association for the relief and control of tuberculosis and planned for children suffering from that disease. In January, 1909, the school was transferred to a new building in Franklin Park. The educational program was supplied by the school committee, the association furnishing all other services. The program was essentially of the Charlottenburg type.

New York City developed a program of: (1) classes for children with tuberculosis; (2) classes for anemic children; and (3) open-window rooms for normal children, beginning with the famous ferryboat class in December, 1908. Here an unused ferryboat, the *Southfield*, was used for the first open-air school. Other ferryboat and roof schools followed. For the most part the open-air classes for anemic children have been housed in regular school buildings.

One of the few private schools which ever developed open-air classes was Horace Mann School, the demonstration school of Teachers College, Columbia University. Two rooms of solid construction were erected on the roof of one of the college buildings. Indoor toilet rooms and an indoor room for clothing and for warmth were provided. A liberal space for recreation was set apart on the same roof. Three grades of the lower elementary division were taught. At one time enrollment in the Roof School was a much-desired privilege. While the school was planned for the less strong children, many robust youngsters were admitted on the request of the parents. Special costumes devised by a famous arctic explorer were used. With the change in thought regarding the value of outdoor classes, the project was abandoned. The program, as is characteristic of the whole school, was progressive and informal. Educationally the outdoor group made progress equal to that made in the indoor classes; in terms of physical growth the results were not impressive.

In Chicago, open-air classes were begun in 1909 and had the coöperation of the Elizabeth McCormick Memorial Foundation, which defrayed special costs beyond those for regular school equipment and personnel. The movement spread elsewhere through the country, where special schools or rooms were built in many different cities.

MacDonald,¹ in an analysis of this general type of project, called attention to certain characteristic features:

¹ See page 153.

1. Fresh air and sunlight.
2. A proper and sufficient diet.
3. Rest.
4. The hygienic way of life.
5. Individual attention.
6. Medical treatment.
7. The curriculum, where ordinary elementary school subjects are taught but made as practical as possible. Physical training, nature study, gardening, and handicraft classes are also undertaken.

THE PRESENT SITUATION

For some years stress was laid upon fresh-air classes. They seemed to obtain certain advantages as compared with the unsatisfactory ventilation of the average schoolroom, where fresh air, properly conditioned, was not available in proper quantity or quality. As far back as 1838 Horace Mann had warned against overheated, poorly ventilated classrooms and demanded that a thermometer be supplied for each classroom.

But these classes, once highly approved, fell into disfavor with the National Tuberculosis Association, their principal sponsor in this country, when there came a change in the point of view of specialists on tuberculosis regarding the open-air treatment for tubercular patients. Then, too, came modern air conditioning. In 1923 the New York State Ventilation Commission set desirable standards for classroom ventilation and proposed certain plans for air conditioning. These, however, were never very widely adopted. As air con-

ditioning of classrooms has improved, less and less stress has been placed upon open-air projects for normal children. The issue, at present, is considered controversial. However, fresh-air classes continue to exist in certain urban communities in which they receive enthusiastic approval. In any case, the values of rest periods and superior classroom hygiene cannot be questioned.

The children particularly benefiting from the fresh-air program seem to be:

1. Potential cases of tuberculosis, either contacts or undervitalized children.
2. Those requiring an intermediate educational program between hospital or preventorium and the responsibilities of the classes for normal children.
3. Cardiac cases.
4. Those with poor nervous constitution; e.g., neuromuscular tension cases, a field which scarcely has been explored.

It was claimed in 1918 by MacDonald (who probably made the most extensive study of the work), that ten years' experience had given positive proof of the following advantages of these schools and classes:

1. Checking of disease in its early stages.
2. Prevention of sequential disease.
3. Opportunities for physical repair.
4. Nurture of debilitated children.

THE NUTRITION MOVEMENT

In 1917 there arose a general interest in the nutrition of children, the work at times taking on some of the features of an evangelistic campaign. Great stress was laid upon tables dealing with height-weight-and-age and sex. Standards of variation were set for underweight and overweight children. Certain authorities disputed the value of these tables as standards of health, and the stressing of this aspect led to the feeling that the weighing and measuring programs for school children were being overdone. Great emphasis was laid upon the rapid drop in weight as an early sign of tuberculosis. Monthly weighing, and measuring of height twice a year, were the practice, in some instances constituting the principal health activity in the school. The studies of the American Child Health Association in the late 1920's led to a change in attitude toward this work, although no successful substitute was suggested. Preference was given, as elsewhere in education, to an individual pattern for progress rather than to forcing the child to fit a group pattern as set by a table of averages or even a distribution curve.

TUBERCULOSIS THROUGH THE AGES

Tuberculosis and cardiac weaknesses are the most common ailments of children enrolled in open-air schools. Both have been known and diagnosed in each period in history according to the prevailing theories of the time. A brief survey of their history reveals the

forward strides achieved by medicine and science in combating both these diseases.

PROGRESS IN DIAGNOSIS AND TREATMENT

By common consent Hippocrates (460–370 B.C.) is recognized as “The Father of Medicine” and as the greatest of all physicians. However curious his theories of pathology may have been, his powers of keen observation have revealed pictures of diseases which might, with a few changes and additions, take their place in any modern textbook of medicine. Among such pictures is his description of “phthisis,” by which name pulmonary or lung tuberculosis was formerly known.

Galen (131–201 A.D.), the Greek founder of experimental physiology, describing the different forms of phthisis, mentioned its infectious nature and proposed a full milk diet and climate therapy (sea voyages and elevated dry places) for its treatment. The greatest of the Jewish physicians of the Western Caliphate, the Cordovan Avenzoar, who died in 1162 A.D., recommended goat’s milk in phthisis. Later (1720) Benjamin Martin, in *A New Theory of Consumptions*, discussed parasitic microorganisms as a cause. In 1825 Pierre-Charles-Alexandre Louis (1787–1872), the founder of medical as distinguished from vital statistics, published the report of his researches on phthisis, based on 358 dissections and 1960 clinical cases. He pointed to the frequency of the disease in the apex of the lung.

A contemporary of the French School, René-Théophile-Hyacinthe Laennec (1781–1826), was an

early victim of phthisis. In 1819 he invented the stethoscope, the foundation of modern knowledge of diseases of the chest. He wrote the most important treatise on diseases of the thoracic organs ever published, in his *Traité de l'auscultation médiate*, and left masterly descriptions of many chest conditions.

In the United States, James Jackson, Jr. (1810-1834), described one of the early diagnostic signs of incipient phthisis — the prolonged expiratory sound in breathing. Samuel George Morton (1799-1851) of Philadelphia summed up the knowledge of his time in *Illustrations of Pulmonary Consumption* (1834). The X-rays were discovered by Wilhelm Conrad Roentgen in 1895. The same year Carlo Forlanni (1847-1918) introduced the treatment of phthisis by artificial pneumothorax, a method of immobilizing one lung in order to attempt by rest the cure of the tuberculosis therein.

Robert Koch (1843-1910), of Klausthal Hannover, in 1882 discovered the tubercle bacillus by special culture and straining methods. It is often known as the "Koch bacillus" or the "red bacillus," the latter because of the color in which it is stained in the preparation of microscope slides. Edwin Klebs (1834-1913), of Königsberg, Prussia, experimented with various products for the treatment of tuberculosis, including the use of the tubercle bacilli in preparations. In experimental medicine Jean-Antoine Villemin (1827-1892), of Prey (Vosges), proved that tuberculosis is a specific infection, due to an invisible inoculable agent and transmissible by inoculation from man to the lower animals. In 1870 he stated: "The phthisical soldier is to his mess-mate what the glandered horse is to its yokefellow."

Villemin's research, however, gained little credence before the advent of Pasteur (1822-1895).

In 1898 Theobald Smith, at Harvard, isolated both the bovine and human types of tubercle bacilli. The bovine type, as well as the human, infects man. There are also avian and fish types. In the same year Dr. William Osler directed two women medical students in the study of tuberculosis.

In 1887 the first dispensary for persons with tuberculosis was opened by a Dr. Phillips of Edinburgh, Scotland. In 1904 the Health Department of New York City opened its first dispensary for tuberculosis patients. The previous year, in the same city, certain hospitals began to use student nurses for tuberculosis patients. Nurses caring for this type of patient are X-rayed regularly as a preventive measure.

TYPES OF CLINICAL DEVELOPMENTS

The most recent clinical developments are of several types:

1. Operative, such as injecting air into the pulmonary cavity to rest the lung by forming a pneumothorax, or the alternative of collapsing the lung on one side by cutting the phrenic nerve which innervates the diaphragm, thus immobilizing that muscle. Surgery is used with success in bone and lymph-node tuberculosis.
2. Sun therapy and allied treatments. Rollier was very successful with bone tuberculosis by sun treatment, but too much sunlight is harmful in other types of cases.

3. Serological tests and various sera for treatment. Much experimentation has occurred recently. Sera for treatment have been one of the common ways of exploiting the tuberculous.
4. Surveys of school children, in which a new and cheap form of X-ray plate (using sensitized paper instead of film) is utilized and where various added diagnostic tests are given as indicated. Health examinations and weighing and measuring school children at regular intervals have been of great assistance, if followed up.
5. Supervision of contacts.
6. Improvement in housing, working conditions, knowledge of nutrition by the layman, and better general care of health, partly as a result of public health education. This program of education has been made possible chiefly through the sale of special seals, the history of which follows.

THE SEAL AGAINST FATE

In 1903 Einer Holboll, a postal clerk in Denmark, conceived the idea of a non-postage stamp to be used as a message of hope on letters and parcels. These stamps came to America in 1904 on letters to the famous philanthropist and sociologist, Jacob A. Riis, who, in *The Outlook* of July, 1907, proposed issuing a similar seal for this country.

A few months later the idea was tried out by Emily P. Binell of the Delaware Red Cross. By 1920 the National Tuberculosis Association had taken over the sole sponsorship of the Christmas seals. In 1936 the sale of these stamps brought in a total of eighty-

three million dollars. This sum adequately supported the association and its two thousand affiliated organizations, as well as nearly one thousand clinics and more than half of twenty thousand public health nurses who give full or part time to tuberculosis patients and to twelve hundred preventoria for children.

THE SANATORIUM MOVEMENT

Open-air treatment for phthisis patients existed in Scotland about 1747, and a seaside hospital for scrofula (glandular tuberculosis — the "King's Evil," supposedly cured by a touch of the royal finger) was opened in Margate in 1791.

George Boddington (1799–1882), of Sutton Colfield, England, in his *Essay on Treatment of Pulmonary Consumption* (1840), discussed the modern views on the advantages of cold dry air, exercise in the open air, and abundant nutrition for tuberculosis patients. Medical critics of his day were most hostile to his views.

The first sanatorium for phthisical patients was established at Görbersdorf, in the Waldenburg Mountains, by Herman Brehmer in 1859. It still exists. Its success resulted in the establishment of the famous institutions of Carl Spengler at Davos and Edward Livingston Trudeau (1845–1915) at Saranac Lake, New York. In 1876 Peter Dettweiler founded his sanatorium at Falkenstein in the Taunus, introducing the reclining-chair rest cure in the open air, and portable receptacles for sputum. The movement grew in England, Germany, and the Crimea, on the Riviera, and in this country where either arid or semitropical weather existed, and on the seashore. In 1888, in Paris, the

first international congress for tuberculosis was held, and in 1901 an international association was formed.

*It is from the sanatorium practices that the routines of the fresh-air classes have been derived. Indeed, in the sanatoria and preventoria, as far as is practicable, educational programs parallel medical practice.

In 1935 Miss Margaret Fitzgerald of Grasslands Hospital, Valhalla, New York, made a survey of the educational activities in tuberculosis sanatoria. She reported that more than 50 per cent of them have public address systems; that more than 33 1/3 per cent broadcast health talks to patients in bed; and that 11 per cent broadcast educational courses.

CONVALESCENT INSTITUTIONS

In 1908 Dr. A. M. Forster established at Towson, Maryland, Endowood Farm, the first colony for convalescent tuberculosis cases. This was the only institution of the kind in the United States at that time.

In 1915 the Wisconsin legislature established the Lake Tomahawk State Camp, for which the State Vocational Rehabilitation Bureau now provides training courses.

In 1926 Potts Memorial Hospital at Livingston, New York, was opened. Its objectives were: restoration of early and moderately advanced cases of tuberculosis to physical and mental health; restoration to economic independence; reduction in the percentage of relapses. Schedules for work, rest, and recreation are prepared on a prescription basis. All the activities necessary to maintain the institution are carried on by the patients.

In 1929 the Olive View Sanatorium in California

was established. Each patient receives an allowance which is enclosed with the amount of maintenance work done.

The Hennepin County Tuberculosis Association, Minneapolis, maintains a boarding club for arrested cases, where they may stay while being retained by the State Board of Vocational Rehabilitation.

In New York City the Bellevue Settlement House provides a boarding club for young women, where they may recuperate after their discharge from sanatoria.

HEART DISEASE THROUGH THE AGES

Far less romantic than the history of tuberculosis is that of heart disease. "The master of those who knew," the Asclepiad Aristotle (384-322 B.C.) of Stagira, noted through the dissection of animals various points about the anatomy and physiology of the heart and great vessels. It was not, however, until William Harvey (1578-1657) of Folkestone, in Kent, made his studies of the circulation that the matter was really understood. Galen, Servetus, Vesalius, and others were hampered by philosophical speculations and by the fact that material for dissection was sometimes unavailable and the practice frequently illegal. The invention of the stethoscope, the ability to secure subjects for anatomical study, the increasing contributions of the experimental laboratories, the invention of the X-ray and the fluoroscope, the invention of various instruments for studying the pulse, and careful clinical studies followed by post-mortem observations, all have led to the modern scientific knowledge of the heart and its

physiology and pathology. Likewise has come increasing knowledge of the proper therapy both in terms of hygiene and in terms of available drugs. In certain painful conditions, modern surgery has been finding a new approach.

Yet even today, as in the case of tuberculosis, rest under proper conditions is an important factor in stabilizing the heart condition. With the knowledge that cardiac disease in childhood is most commonly of rheumatic origin, has come a preventive program in which diseased tonsillar tissue, a nidus of infection, is removed before cardiac and other damage is done. Owing to the better understanding of cardiac cases and their needs there has been, for some years, the jesting phrase that "heart cases live happily ever after and die of something else."

As other diseases are conquered by science, one by one, heart disease, as well as cancer, has come to the fore as a cause of human mortality. It is estimated that two million adults and seven out of every one thousand school children have heart disease in some form. It is the commonest cause of death.

CAUSES OF HEART DISEASE

The causes of heart disease vary according to age.

With the young child:

The cause is usually fever.

It is most common between the ages of twelve and fifteen.

These cases do well in warm climates, but there is

danger of exacerbation if they return to the cold climate.

With the young adult:

Almost any type of heart disease is found.

Syphilis must always be kept in mind.

The age range is for the most part between thirty-five and forty-five.

With the older adult:

After forty-five, high blood pressure and hardening of the arteries appear in the clinical picture.

ORGANIZATION FOR CONTROLLING HEART DISEASE

In 1915 the Association for Prevention and Relief of Heart Disease was organized. It later became known as the New York Heart Association. The association gathers data on the incidents of etiology and the life history of heart disease. Special attention has been given to convalescent care and vocational guidance. A special study has been given to the cardiac child.

The American Heart Association has united with the New York Tuberculosis Health Association and has become the heart committee of this association. This committee undertakes such types of work as research, cardiac clinics, school health programs, and health education.

The committee on cardiac clinics determines the standards for clinics, where they shall be located, the number required to serve an area, etc. There are forty-six cardiac clinics in greater New York alone.

One of their duties is to determine whether working papers shall be issued to children with heart trouble.

There is a similar committee on convalescent care in convalescent homes. The school committee has made studies of the effect of school work on different types of cardiac children.

Chapter Seven

THE MENTALLY HANDICAPPED

ONE of the most pathetic chapters in the history of man is written in the records of the care and education of the mentally handicapped. Most of this record is negative, for it is only in the most recent years that this group and their needs have been given much consideration or understanding.

In terms of their care and education, the interest of the educator today cannot be confined to those of the lowest two or three per cent of the school population. Various therapies of a semieducational nature have come into the picture for the committed cases. Likewise certain forms of idiocy and imbecility have become of interest to clinicians, who in some instances have brought improvement through endocrine or other therapy. Brain surgery, various medical régimes, and treatments have entered the picture, at times with surprisingly favorable results. And it seems true that the modern progressive educational programs hold new goals of accomplishment for the deviates who are educable.

One great misfortune in work with the mentally handicapped has been a confusion of terminology based upon (1) failure of leaders to meet upon a common ground and (2) an unwise attempt to induce the public and the parents of mentally handicapped children to rationalize upon the situation instead of facing it squarely as a social problem to be met.

In passing, it is well to recall that a mental handicap does not necessarily exist alone. It may be and often

is superimposed upon the various types of physically handicapped, making a double or triple defective individual and creating multifold problems. Likewise it is well to recall that various tests based on the achievements of so-called normal individuals may do injustice to the physically handicapped when interpreted, not in terms of achievement, but in terms of potentialities.

EARLY ATTITUDES OF SOCIETY

The individuals comprising the group that may be classed as the mentally retarded have through the ages, like those in other handicapped groups, been the object of social mistreatment and neglect and regarded as "objects of derision, aversion, or persecution."¹ Philosophically, similar attitudes survive through each period in history. Among backward and primitive peoples, under compulsion of the law of tribal survival, the fate of the idiot and the imbecile was none too secure. When a more tolerant attitude emerged, as among the Romans, such persons were objects of amusement and diversion, and it is quite likely that many of the jesters and court fools of the Middle Ages were mentally subnormal deviates. At times common belief regarded the feeble-minded as possessed of divine spirit. Their disordered mumblings were taken as manifestation of the voice of the gods, with the power of oracles. At other times they were regarded as possessed of evil spirits, in which case their lot was hard indeed.

¹ Barr, Martin W., *Mental Defectives: Their History, Treatment, and Training*, page 24. P. Blakiston's Son & Co., Philadelphia; 1910.

IN ANCIENT TIMES

The treatment of the mentally handicapped in ancient times may possibly be explained on the basis of necessities of primitive society — if the tribe were to survive, the unfit must be eliminated. Unable to accept social obligations, they were given no social rights. They were considered demon-possessed; the wrath of the gods was upon them. They were, at times, sacrificed to the gods, as being peculiarly the gods' property. At times — and the tradition has not yet been put down — they were considered as a punishment visited upon parents for various sins.

Doubtless the attitude of Romans in the decadent era ameliorated the fate of the mentally handicapped. Wherever the group gave pleasure to their masters and friends, or where, as sometimes, they became trusted confidants, they were treated well enough. For the most part, however, their social status appears to have been that of slaves.

The early Christian era introduced a spirit of compassion for the unfortunate. The mentally afflicted, as early as the fourth century, were in places provided with special refuge, along with other helpless groups, although no effort was made for education or for special training of the handicapped.

IN THE MIDDLE AGES

In the Middle Ages, under the pall of ignorance and superstition, the surges of religious strife, and the teachings of the Reformation, the mentally deficient were referred to as beings "filled with Satan." Hence, for

their own good, as well as for the protection of their fellow men, they had to be scourged. In these cases also exorcism was a common treatment for the salvation of the soul.

It seems strange that, throughout the centuries, the attitude of Christ Himself toward the afflicted was so little copied. He taught compassion and care for the poor, the lame, the blind, the "demon possessed," the mentally afflicted, and other handicapped.

As early as the fourth century Christian communities were making special provision for the protection and care of the feeble-minded, though no attempt was made to educate them. Yet, in contrast, the Romans gave to that unhappy group of endocrine variants, the cretins, that particular name as suggesting that that was what the Christians were like. With this contrast of philosophies in regard to the handicapped came superstition, as mentioned previously. That the treatment of any type of handicapped appeared to follow a confused policy during the ages may be attributed to cross currents of many types of influence partially nullifying the teaching of Christ.

DURING THE REFORMATION

The Reformation period, for example, brought a reverence for ancient attitudes and practices. Old Testament rather than New Testament imagery prevailed. Imbeciles were believed to be afflicted by evil spirits. Luther and Calvin referred to them as "offspring of the evil one."¹

In the Middle Ages, too, comes the confusion about

¹ Barr, Martin W., *op. cit.*, page 24.

the meaning of the word "fool." Clowning was the main function, although in some instances the mentally handicapped might serve as the butt of crude jests rather than as creative wits.

The term "fool" as it appears in history, however, means an entertainer rather than an idiot. Some fools of this type were exceedingly clever and appeared, like Till Eulenspiegel, in the mythology of many nations. The half-witted and deformed were considered "God's folk" among primitive Russians. Others named them "infants of God." Even today the impression prevails that the lunatic is "an awe-inspiring figure whose reason has ceased to function normally because he has become the mouthpiece of a spirit, or power external to himself, and so has access to hidden knowledges—especially knowledge of the future."¹

It was in this same period that witches and wizards were sought and burned. Anything not explainable otherwise was attributed to black magic. And so, in the case of the mentally handicapped, it was logical that scourgings and exorcisms were resorted to, for the evil spirits must be driven out to save the victim's soul.

A more humane view, however, ultimately prevailed. In the latter part of the sixteenth century Professor Felix Platter of Basel called attention to the condition of the cretins in these words: "Misshapen bodies, deformed heads, swollen tongues, almost entirely without the power of speech, staring on the ground, with darkened countenance, the object of curiosity and scorn."

¹ Welsford, Enid, *The Fool*, page 76. Farrar & Rinehart, Inc., New York; 1935.

BEGINNINGS OF INSTITUTIONAL CARE

The first colony for the feeble-minded was founded in Belgium in the thirteenth century. The first institutional care for the feeble-minded, important because of its line of contact with subsequent developments, was begun by Saint Vincent de Paul (1576-1660) and his Sisters of Charity. The château into which they gathered many unfortunates, including the feeble-minded, became the Bicêtre, a famous Parisian hospital and asylum.

A NEW PHILOSOPHY

The movement toward sense realism and the inductive method in education was a reaction from scholasticism and exclusive reliance on Aristotelian logic. The sense realists held that knowledge is gained primarily through the senses, and hence emphasized training in sense perception. The result of this emphasis was to replace the traditional literary and linguistic courses by materials from nature and community life. Emphasis on the inductive method led to the beginnings of a science of education and the study of the child as the center of the learning process.

Francis Bacon (1561-1626) was, of course, the leading spirit in this movement, but its influence on the education of the handicapped came through the later work of John Locke (1632-1704) and Rousseau.

LOCKE AND THE INDUCTIVE METHOD

Locke, in *Conduct of the Understanding*, undertook to study mental processes by the inductive method.

His conclusion was that the mind is a *tabula rasa*, a passive receptor of sense stimuli, and that knowledge therefore comes only through the senses. This thesis became the basis of sensationalism or empirical psychology. The well-known phrase, "a sound mind in a sound body," indicated the emphasis Locke placed upon the diagnosis of the individual pupil's mental processes. He held that pupils' minds differed just as did their bodies. This emphasis on sense perception led to the beliefs that the natural curiosity of the child should be utilized; that books were not the most important source of learning; that learning should be accompanied by pleasurable sensations; and that the bodily basis of the sense life should be strengthened by physical training.

Locke's sensationalism became the philosophical foundation of Rousseau's naturalism. The basic idea in Rousseau's voluminous writings is that educational theory and practice must be based on the nature of the child, rather than on the traditional requirements of an artificial society. In Rousseau's view the child's original nature, instincts, tendencies, powers, or capacities were to be permitted unrestricted expression. Rousseau's emphasis gave great stimulus to child study and to the development of psychology as a science. If education is to be based on the child's native instincts and capacities, it becomes important to make a careful study of the child's native equipment. The study of the child's mind, its development and functioning, was thus elevated into a popular science. The French Academy of Sciences recognized the importance of this work with children.

PEREIRE, THE PIONEER

Recognition was given by the Academy also to Jacob Pereire (1715-1780) for his work with the deaf.¹ Pereire improved the language of signs, and taught that sound vibration could be transmitted to senses other than the ears. He taught "unfortunates the art of thinking,"² thus being the pioneer in all fields of the handicapped. Rousseau is said to have visited Pereire's school and found in it evidences of the truth of his theories. In his practice Pereire endeavored to carry out Rousseau's educational philosophy.

ITARD, THE PRACTITIONER

The first important effort at special training for the feeble-minded was made by Jean-Marc-Gaspard Itard (1775-1838).³ Itard was influenced in his experiments by educational theories developed during the seventeenth century by the sense realists and culminating in the contributions of Locke and Rousseau.

Through the writings of the French philosopher, Condillac, Itard became familiar with the educational notions of the sense realists, and he determined to put their theories into practice.

He began his four-year experiment with the Wild Boy of Aveyron, a twelve-year-old boy who had been found living an animal existence in the woods of Cannes, in southern France. Itard at the time (1800) was surgeon to the National Institution for the Deaf

¹ See page 59.

² Barr, Martin W., *op. cit.*, page 25.

³ See page 26.

and Dumb in Paris. Although he finally became convinced of the futility of accomplishing worth-while results with the boy, he nevertheless did succeed in effecting some improvement, mainly by systematic sense training. His work, too, was commended by the French Academy of Sciences.

The methods employed by Itard are explained in detail in his *Rapports et Mémoires sur le Sauvage de l'Aveyron*, and because they are of such consequence to future procedure, their main principles are given here. Itard approached his task with the belief that there is in idiots a "residual, reflective power that once awakened might be trained."¹ He sought in his treatment of the savage boy:

1. To attach him to social life by rendering it more pleasant to him than his former existence, but by making it closely analogous to that former existence rather than by a radical departure from it — a principle of great psychological import.
2. To arouse the nervous sensibilities by an intense activity program.
3. To extend the scope of his idea-content by giving him new wants and by increasing the number of his reactions to the objects about him.
4. To encourage in him the use of speech by compelling a necessity of imitation.
5. To exercise often the simplest of mind activity in connection with his physical wants, and then divert that mental activity to the objects of instruction.

¹ Barr, Martin W., *op. cit.*, page 26.

Itard originally had the theory that the wild boy was not feeble-minded, but that because of lack of social learning he had grown up as does the savage. The objective methods which he conceived as necessary for the boy's instruction were elaborated upon by his great follower, Édward Seguin, who in turn inspired much of the basic nature of the work of Montessori later.

SEGUIN, THE APOSTLE OF THE IDIOT

The formal history of schools for the mentally defective began with Seguin (1812-1880), called the "Apostle of the Idiot." In 1837 he established a school for such children in Paris, and five years later he became head of the school at Bicêtre. In 1848 he came to the United States.

Seguin's contributions to this field were many and significant. He was associated with such state institutions as those of Massachusetts, New York, and Pennsylvania, and did much personal work in the training of defectives in American institutions. Above all, also, he inspired public interest in such work. In 1880, the year of his death, he started a private school at Orange, New Jersey.

A number of books by Seguin on the care and training of the mentally subnormal show that the methods of instruction were almost entirely objective in nature; that is, training of the hand and the senses. The plan he outlined was a step-by-step procedure: (1) from use of the muscular system, (2) to that of the nervous system, and (3) from this to education of the senses, (4) to the development of general notions, and (5) eventually to abstract thought and a grasp of moral principles.

Seguin's method was thus an elaborate system of training the hand and the senses of taste, smell, sight, and hearing. He believed there was "a connecting link between sensation and idea" and "the necessity for an internal intelligent reflecting power."¹

He said: "Our instruments of teaching must be those that go directly to the point. In view of that necessity we must use objects, pictures, photographs, cards, patterns, figures, wax, clay, scissors, compasses, glasses, pencils, colors, even books."

Seguin proposed "to lead the child from the education of the muscular system to that of the nervous system and the senses," and "from the education of the senses to general notions, from general notions to abstract thought, from abstract thought to morality."

In the course of his work Seguin developed different ingenious types of teaching materials. Some of these materials have since gained great prominence in the construction and use of performance tests to ascertain mental level.

GUGGENBÜHL, PATRON SAINT OF THE CRETINS

In 1842 Doctor Guggenbühl, the "Patron Saint of the Cretins," established on the Abendberg, near Interlaken, an asylum for the *care* of cretins, *not their education*. It is said to have been the first institution operated on the cottage plan. With higher altitude and a diet of vegetables, fruit, and very little meat, much was accomplished. Leaders from all over Europe and America inspected Abendberg, with ideas of

¹ Barr, Martin W., *op. cit.*, page 34.

starting similar organizations. Dissatisfaction arose in the school and Guggenbühl was forced to resign.

SAEGERT

In the same year, 1842, Doctor Saegert, director of the Asylum for Deaf Mutes in Berlin, started to work with mental defectives along physiological lines. His success led him to organize a private school for them, the first school for the feeble-minded in Germany.

Seguin, Guggenbühl, and Saegert were all pioneers in the practical field of education of the feeble-minded, carrying out the theories of Pereire and Itard.

SCHOOLS AND INSTITUTIONAL EDUCATION

The education of mental defectives was slow in beginning, but the latter half of the nineteenth century witnessed a remarkable advance in the number of such schools established in European countries.

IN EUROPEAN COUNTRIES

In the period from 1846 to 1881, thirty-five institutions for the education of the feeble-minded were established in Germany. Most of these institutions devoted themselves mainly to custodial care, and admitted cretins, epileptics, cripples, and friendless normal children.

Notable among these institutions are the experimental school at Hubertsburg; the Alsterdorfer Institution, a model charity colony; and the Colony of Mercy at Bethel, one of the largest institutions for

epileptics and one which sends its remedies all over the world.

In the Scandinavian countries these groups are kept in protected societies, carry on industries under strict supervision, and are reported to be nearly self-supporting. In Sweden, in 1870, Skofde founded the Stockholm Society for the Education of the Feeble-Minded. Schools for backward children were started in the same city in order to help train teachers for this work.

Norway and Saxony have a compulsory school law for imbeciles. Their schools are models as regards buildings, management, and methods. They advocate separation of sexes, small classes, and training for special life occupation. Untrainables are neglected entirely.

After Abendberg (Switzerland) was closed, nothing was done in that country again until 1883. In 1899 a movement was started to enact laws to stop increase of this group by birth-control measures. Trainables are now cared for by classes in the public schools, others in asylums; the untrainables are neglected.

In Belgium care of the feeble-minded is left largely to the Brothers of Charity and the Sisters of Charity. Beginning in 1892, institutions have been established in the larger cities, giving custodial care and industrial and manual training. Brussels and Antwerp have schools for backward children under the commissioners of public instruction.

Notable advances took place in Italy at the turn of the century. In 1898 asylums for backward children were opened in Rome by Doctor Segatelli and Doctor De Sanctis. A few years later Doctor De Sanctis launched an elementary intelligence test in the same

year that the Binet test was first published (1906). The Italians advocated the use of medico-pedagogic methods, as in the institution of Chiavari, founded in 1899.

The influence of Itard and Seguin is to be noted in the translation into Italian (1897) of the works of both these authorities. This translation was made by Maria Montessori. Ten years later she organized the House of Childhood in Rome, in which she attempted to apply to normal children from three to seven years of age the principles advocated by Seguin.

Through the influence of these leaders, special classes in public schools were started for backward children, and committees to further this work were formed throughout Italy.

IN GREAT BRITAIN

Inspired by the work of Doctors Seguin, Guggenbuhl, and Saegert, Doctors Connolly and Reed started a similar school at Bath, England, in 1846. Institutions in five other centers had been started by these men before 1855.

As early as 1819 Doctor Poole of Edinburgh had advocated the education of mental defectives. Bal-dovan Asylum near Dundee was established in 1852, and a similar institution was opened at Edinburgh in 1855. The Scottish National Institute for the Education of Imbecile Children opened at Larbet in 1861.

In the British dominions, Canada, South Africa, and Australia each made provisions for their mental defectives. There are special schools at Mooner Ponds, Melbourne, and Adelaide. The Orillia Hospital near

Toronto, Canada, has worked out a notable educational and research program.

IN THE UNITED STATES

Meanwhile efforts were being exerted in this country for legislation in behalf of these unfortunates. In 1837 the versatile Dr. Samuel G. Howe¹ of the Blind Asylum at South Boston started a class for the training of idiots. In 1846 an unsuccessful attempt at legislation for idiots was made in New York State under the leadership of Doctor Backus. In 1846 the legislature of Massachusetts appointed a commission of three men, including Dr. Samuel Howe, to study the situation. This commission made a study of Doctor Seguin's methods, and urged the founding of a school. Thus, in 1848, the first state institution in the United States came into existence in Massachusetts under the guidance of Doctor Howe. This school, at first experimental, later became the Massachusetts School for the Feeble-Minded. The first state appropriation for such a school was made by Massachusetts for this school, which was separately incorporated in 1850. It was moved to Waverley in 1891. Dr. Hervey B. Wilbur opened the first private school at Barre, Massachusetts, in 1848. This school was later to become the oldest and largest of its kind in America, featuring the cottage form of organization.

In 1851 Doctor Wilbur was called upon to head an experimental school at Albany. This proved so successful that in 1853 new buildings were erected at

¹ See page 31.

Syracuse, and here the physiological methods recommended by Seguin were practiced with great success.

The school at Syracuse is said to be the first building in America erected for this specific purpose. At present Syracuse admits "no untrainables and no epileptics."

The principles of differentiation of treatment are carried out in the institutions of New York State; Randall's Island Asylum (1849) and Letchmere Village for experimental work with children; New York State Custodial Asylum at Newark (1878) for the brighter class of feeble-minded women; the Rowe State Custodial Asylum for helpless and unimprovables (1894); the Craig Colony for Epileptics at Sonyea (1896).

Pennsylvania began work with mental defectives in 1852, when James Richards opened a private school at Germantown. In 1859, through the influence of Doctor Richards, the state opened a school at Elwyn, which is now fully equipped to train its patients. A similar school at Polk serves the western part of the state.

These schools were followed by similar action in other states: in Ohio in 1857, in Connecticut in 1858, in Kentucky in 1860, and in Illinois in 1865.

Up to 1913 there were only two institutions in the United States especially for feeble-minded girls and women. One of these was at Newark, the other at Vineland, New Jersey. In that year there was opened also the well-known Pennsylvania Village for Feeble-Minded Women of Child-Bearing Age, now the Laurelton State Village.

At first, attempts were met with distrust and doubt, and all the schools were begun as experiments. In the

beginning, all the schools were strictly educational and not asylums. Hopeless idiots were not admitted. However, the aftercare of the pupils and the care of hopeless cases became a great problem.

MODERN THEORIES OF CARE AND TRAINING

In 1876 the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons was founded, to discuss the education and training of the feeble-minded. Since that time many new institutions have been created and a new system followed. Today all grades of idiots are cared for, but they are carefully classified and segregated. The recognized aim is to make the child useful; about 15 per cent of the cases have become self-supporting. There are two main divisions, educational and custodial. The educational department stresses kindergarten methods, and later gives industrial training. The custodial department cares for the hopeless cases and supervises the adults who have completed their education in their routine tasks. The colony plan, now adopted almost universally, makes possible the grouping together of similar cases. This preventive custodial care has proved much more economical to the state than the punitive custodial care which resulted from the old-time neglect and the criminal tendencies of feeble-minded persons.

When the training-school movement was well under way, the concept gained headway that the feeble-minded could grasp the subjects usually studied by normal children if the training period were longer and

if the presentation of the material were of special character. The likelihood of such training was that they might reach approximately the same mental plane as that of other persons.

Eventually this idea was supplanted by the views of Dr. H. H. Goddard of the Vineland Training School and Dr. C. B. Davenport of the Eugenics Laboratory at Cold Spring Harbor, Long Island. They held that mental deficiency was always hereditary and that no kind or amount of training would reduce it. The only solution was segregation, which ultimately would bring about elimination of this group of individuals. Thus institutionalization was the keyword in the consideration of such persons.

However, a number of developments of the last generation have brought into prominence other theories of treatment.

MENTAL TESTING TO THE FORE

The use of mental tests in the army during the World War revealed that of a large cross section of males between the ages of 21 and 31, 15 per cent did not rise above the 10-year level and 30 per cent were recorded in the 10- to 14-year level; that is, almost half of those tested were not of "adult" mentality, in terms of the tests. This startling intimation that mental deficiency exists in the population at large to a far greater degree than was formerly supposed led many authorities to conclude that these tests are as much a measure of acquired knowledge as of native intelligence. But the point of importance for those interested in the welfare of the feeble-minded was that so many of these

men were living successful or, rather, "normal" lives in the civilian world before the war. They were self-supporting and self-reliant. The results of the tests pointed to the folly of the segregation idea, since it would be entirely impossible to isolate everyone who is "feeble-minded." They also suggested that if many of the feeble-minded obtained the proper training, perhaps they too could achieve a measure of self-sufficiency in the outside world.

The whole history of the mental testing movement is too specialized to be treated adequately in this chapter.¹ Its origin, however, affords another illustration of the contributions of the handicapped field to general education.

FARM COLONIES

Such findings gave great impetus to a development that had begun some years before, in 1906. In that year the institution at Rome, New York, started its first farm colony. Since then, under its superintendent, Dr. Charles Bernstein, the school has made extensive experiments with such farm and industrial training for its inmates. Careful follow-up studies reveal a surprisingly large number of cases of successful extramural life after discharge. Similar experiments have been carried out on a large scale by Dr. Walter E. Fernald, superintendent of the Massachusetts School for the Feeble-Minded at Waverley.

Farm colonies and industrial training have been a prominent feature of the work at the Vineland Train-

¹ For the history of the testing movement consult: Peterson, Joseph, *Early Conceptions and Tests of Intelligence*. World Book Company, Yonkers-on-Hudson, New York; 1925.

ing School in New Jersey, and at Columbus, Ohio, and Lincoln, Nebraska.

STUDIES OF HEREDITY

Further, more recent investigations tend to show that heredity is not so potent a factor in the production of mental deficiency, and that feeble-mindedness does not always beget defective offspring. For instance, Dr. C. B. Davenport, at the Cold Spring Harbor laboratories, discarded the theory that mental deficiency is due to unit factors and hence is always hereditary. Doctor Davenport, in collaboration with Dr. F. H. Danielson, reported in a book on *The Hill Folk* that even with the mating of pairs of feeble-minded persons, the Mendelian expectation of feeble-mindedness in the offspring did not always materialize. Only 77.3 per cent, not 100 per cent, of the progeny of feeble-minded persons were of like nature. Similar findings were made by Dr. A. H. Estabrook in his study of *The Jukes* in 1915. The annual reports issued by Doctor Fernald at Waverley have a similar point of view; namely, that feeble-mindedness may be more adventitious in its origin than previously supposed, and that it is susceptible of training to levels of usefulness. Careful experiments conducted by Dr. Mary Vanuxem at Laurelton State Village in Pennsylvania indicate that if the training is specific and objective rather than academic and abstract, effective preparation for successful extramural life can be imparted.

THE ENGLISH PLAN

In 1913 the English Mental Deficiency Act designated the agencies that were authorized to deal with the mentally defective, as follows: (1) the National Board of Control; (2) local authorities; (3) Poor Law authorities and the Ministry of Health; (4) education authorities required to establish special classes for mentally defective children; (5) voluntary associations; and (6) guardianship by private individuals.

THE SPECIAL-CLASS MOVEMENT

The advent of mental tests has had much to do with promoting the special-class movement, their particular merit being the possibility of more definite identification and classification.

The establishment of special classes for the needs of mental defectives goes back to 1859, with the appearance of such a class in Halle, followed in 1867 by one in Dresden. Between 1885 and 1900 classes were established in the following European cities: Vienna (1885), Basel (1888), Christiania (1889), Leicester and London (1892), Brussels (1897), Budapest and Copenhagen (1900), Glasgow (1908), and Paris (1909).

In England the Elementary Education Act of 1914 required special classes for mentally defective children in the public schools and sharply defined admission requirements for the feeble-minded.

In the United States the first special classes for the mentally handicapped grew out of classes for incorrigible and truant boys. In 1896, in Providence, a school

was established for the care and teaching of mentally deficient and backward children.

Special classes for backward and feeble-minded children were started in Springfield, 1897; Chicago, 1898; Boston, 1899; New York City, 1900; Philadelphia, 1901; Los Angeles, 1902. By 1911 the United States Office of Education reported such classes in 220 cities.

Legislation requiring the establishment of special classes for pupils three or more years mentally retarded was passed in New Jersey in 1911, in New York in 1917, and in Massachusetts in 1920. Before the end of 1923 similar work had been authorized by Pennsylvania, Wyoming, Connecticut, California, Wisconsin, Louisiana, Illinois, Oregon, and Ohio.

Since 1911, beginning with New Jersey, 15 states have enacted special laws to promote school education of mentally handicapped children. But no state has as yet formulated an adequate program for the education of mentally backward children in both urban and rural communities.

In 1903 the New Jersey Training School for Feeble-Minded Boys and Girls opened a training school for teachers, the first attempt to give such training to those preparing to teach subnormal children. Many of the leading colleges and universities now offer similar courses.

The Biennial Survey of Education in the United States, 1932, showed that every state in the union except Arizona, Arkansas, Nevada, and the District of Columbia had state institutions for the mentally deficient. The number of such institutions totaled 77, with 80,000

or more inmates. Of these, 18,000 were between the ages of 5 and 14 and 13,000 between 15 and 17.

In 1931 the National Committee for Mental Hygiene reported 624 clinics which give psychiatric service to children as treating more than 50,000 children during the year.

According to the Report of the White House Conference (1931) it is generally conceded that at least 2 per cent, or 450,000, of the pupils enrolled in the elementary grades of the public schools are so mentally sub-normal that special educational provision is necessary in their case.

Progress in the establishment of special classes for mentally handicapped children is shown in the following table from the Biennial Survey of Education:

CLASSES FOR MENTALLY DEFICIENT CHILDREN

	1922	1927	1932
Number of states	23	32	39
Number of cities	133	218	483
Number of pupils	23,252	51,814	75,099

Chapter Eight

THE SOCIALLY HANDICAPPED ¹

AN important area of work in the education of the handicapped will, in the years that are to come, concern itself increasingly with that group of individuals we are beginning to call the socially handicapped. Those with more easily recognized handicaps, such as the blind, the crippled, and the deaf, have received the attention of the scientist and the educator for many years past. It is only recently that groups of people whom we have been in the habit of brushing out of the way with the remark that they were shiftless, unemployable, dependent, or criminal have come to be classified as socially handicapped. It is probably on account of the difficulty of defining the group which we call the socially handicapped that we have postponed the educational approach to the solution of their problem.

This chapter has to do with the consideration of the history of crime and delinquency as a social problem, its orientation in a program for community benefit, and some of the specific problems as they relate to the field of education in the treatment of crime, to the individuals whom we call delinquents, and to efforts at prevention of delinquency at the source.

CHANGING CONCEPTS OF CRIMINOLOGY

From time immemorial, consideration of the problem of crime has been intimately concerned with questions of revenge and retribution. The Old Testament

¹ By Dr. Sanford Bates.

notion of an "eye for an eye and a tooth for a tooth" has only recently begun to seem a harsh doctrine. At the time that it was initiated, it probably seemed eminently fair as opposed to the system of inordinate punishments which its adoption was intended to remedy. Through the Middle Ages down to early modern times the opinion that punishment was the sole cure for crime was firmly fixed in the minds of men.

EARLY THEORY OF CRIMINAL RESPONSIBILITY

In many times and places men who showed antisocial tendencies were held to be possessed of devils which must be exorcised by condign measures. There was little attempt at trial and determination of facts, nor was there any effort made to see that the punishment fitted the crime, much less the criminal. The king or ruler set up his own judicial system, which was tyrannical or lenient as his disposition dictated. The common law of England, established after the Magna Charta had diminished this arbitrary power of the rulers, began the attempt to regulate the matter of punishment according to law. The classical theory of criminal responsibility which differed only in name from the old Biblical theory was that the punishment should not be permitted to be greater than the crime called for. Up to this time we see no evidence that the criminal or delinquent was to be regarded as socially handicapped. In the theory of the law they were *compos mentis*; they were responsible for their acts, and the safety of the community made it essential that prompt and severe punishment be visited on all who offended against the law. A crime was an act intentionally com-

mitted in violation of a public law, and the man who committed it was a criminal whether he was old or young, intelligent or ignorant, sick or well, privileged or unprivileged; his responsibility was the same.

The development of the neoclassic and then the positivist or deterministic school of criminology accompanied, no doubt, a growing tendency to consider the criminal as an individual and to inquire into the degree of his responsibility.

CRIME, DELINQUENCY, AND THE LAW IN
MODERN CIVILIZATIONS

With the development of our modern civilization the problem of crime and delinquency became infinitely more complex. In the attempt to protect themselves it was necessary for communities to pass more and more laws, many of which made criminal, acts which had been heretofore lawful. Crimes have thus been divided into those acts which are *mala per se* and those which are *mala prohibita*. A somewhat different classification of crimes would be those against the person, against property, or against public order.

In the first class, crimes against the person, appeared: murder, robbery, assault, and rape; and in the second class, burglary, theft, arson, and trespass. In all these cases there is a direct and serious injury to the individual — so serious an injury that all citizens of the city united together to prevent its repetition. Here is the real *mala per se*.

It is in the third class of crimes — that is, against public order (*mala prohibita*) — that we have seen the most rapid development. Perhaps treason and sedition

have always been crimes, but the host of new crimes made necessary in the complicated life of our cities to-day are almost entirely statutory in their origin. It may not show any inherent depravity to run through a red light, to spit upon a sidewalk, to buy or sell untaxed liquor, or to fail to comply with the multitude of ordinances and regulations instituted in the public interest, but the violation of these statutes carries with it a degree of culpability which makes the person guilty of such action a criminal.

Coincident with this development has come an increasing realization that criminals differ one from the other in mentality and in physical stamina; and the contributions of the psychologist and the psychiatrist to the subject of criminology have had a revolutionary effect. If a man is incapable of thinking, how can he be deterred from crime by a threat of punishment? The fundamental notion that was stressed all through the centuries, of the complete and utter responsibility of each individual for crime, has only begun to be broken down within the last two or three generations. We have some of the French and Italian criminologists to thank for the development of the deterministic theory. Raymond Salleilles was one of the very first to write of the Individualization of Punishment. A book by that name was published in this country in 1910.

There are, perhaps, some countries in the world which cling steadfastly to the rigid notion of complete responsibility, but in the United States our whole attitude toward the criminal has been tremendously affected by the development of the social sciences.

Unless we have begun to believe that the criminal and delinquent are properly placed in the socially handicapped class, we would not have hospitals for the criminally insane, psychiatric clinics in many of our courts, a rapidly developing probation system, and the juvenile court.

Traditionally a child under seven was presumed to be incapable of committing a crime. From seven to fourteen there is a presumption that he was responsible — that, however, could be rebutted — and from fourteen to twenty-one he was equally liable with an adult person. We have adopted the juvenile court idea to such an extent that in most states today an entirely different attitude and procedure persists, based on the idea that criminals under the age of seventeen, criminals whom we have stopped calling criminals but whom we call juvenile delinquents, may be treated more leniently even though the crimes which they commit may be just as painful or costly as if committed by an adult. Many times, through experiences, we are reminded of the differences which arise in the care and treatment of the adult criminal and the juvenile delinquent.

EMERGENCE OF THE IDEA OF SOCIAL RESPONSIBILITY

The growing complexity of our civilization and the new scientific knowledge as to the nature of personality were two of the reasons for modifying our concept of criminology. A third and equally important one concerned the fact that crime in modern times has become a social rather than an individual phenomenon in any American city. Criminals cannot be separated from

the general community. They are and they remain part and parcel of it. The punitive approach to the prevention of crime has not proved adequate in America. It is true that our law-enforcement system has been faulty, that the inevitable delays and inefficiency inherent in it have minimized its effectiveness. But one needs only to study the statistics of crime in our various communities to see that it is not the community which relies solely upon punishment, however swift and sure it is, that meets with success in the control of crime and delinquency, but the more advanced community where honest law enforcement is reinforced by a program of character building and community betterment activities that is reaping beneficial results in lowered crime rates.

It is significant, therefore, that our great educational institutions are beginning to realize their responsibility toward the criminal, the delinquent, and the potential lawbreaker, and that one of the growing concerns of educators and teachers is to acquire a higher understanding of the problems pertaining to this new type of socially handicapped people.

It is probable that greater difficulties will be presented under such an endeavor, for the reason that our activities and attitudes where the criminal is concerned have never been wholly free from emotion and fear or from the desire for retribution. An insane man or a leper may be fully as dangerous, even many times more so, but we have learned to treat him on a basis of protection. If a man has committed a public wrong, most of us still feel that in some way or other he should be made to suffer just punishment for his crimes. The

consideration of the problem of the criminal as a socially handicapped person is and probably always will be shot through with emotional considerations. Everybody wants a sick man to get well; he tries to get well himself. Most people desire to see a blind man helped and supported. But if the case of one who is socially handicapped is due to some abstruse and not easily defined psychic or neurological condition, we are not likely to be so ready to class such an individual as socially handicapped. If we are to deal successfully with the socially handicapped, we have not only to master certain techniques of treatment and care, but we shall be obliged often to convert our clients to a frame of mind where they are willing to coöperate with us, and also to secure from the public an understanding approval of what we are trying to do.

IMPORTANCE OF PREVENTION AND CURE

But the criminal or the delinquent does labor under a very real social handicap. Our present methods of punishing the law offender often merely intensify this difficulty. We commit men to prison and boys to training school with the naïve expectation that they may be made better by the process, but the abnormal environments in such places and the bad companions whom they meet there oftentimes bring about quite the contrary result. We are sending a young offender to a reformatory, hoping that the experience will "do him good," that he will come out and "go straight," but in many cases the mere fact of sentencing him to an institution places him under a social handicap from which many times he does not recover. The consequences of

his crime include the lowering of his vitality, physical and mental; the social degradation of having to live for a period in the society of men worse than himself; and inability to obtain employment on release. These are some of the handicaps he has imposed upon himself, which he will find difficult to overcome. The continuing distrust of the ex-convict by his community is an additional handicap placed upon him. But it is a matter of great concern to our communities that these persons shall be aided.

To overcome these handicaps when they have been imposed, or to forestall the imposition of them, is in some ways the most important from the public welfare standpoint of any of the divisions of this subject of the handicapped. The blind, the hard-of-hearing, the crippled, are objects of our sympathetic consideration. They deserve all the help we can give them, but they are no danger to our community. The man with a social handicap that leads him into the embarkation upon or continuance in a criminal career not only is one who needs our help and understanding, but is a menace to the peace and welfare of our communities.

VALID CRIMINAL STATISTICS

It is necessary at this point to insert a word of caution in reference to the use of criminal statistics. In spite of the impression to the contrary, there are a great many authoritative and responsible statistics issued periodically by the government and by the states. The Census Bureau, the Children's Bureau, the Bureau of Prisons, and the Federal Bureau of

Investigation publish statistics amounting to ten times more than the average student can assimilate. One who has received much of his education from the daily newspaper will be surprised to learn, after the study of these original sources, first, that with the exception of a slight upturn in 1937, all kinds of crime except rape have been steadily decreasing since 1931; second, that the age of criminals has been increasing rather than decreasing; third, that the cost of crime has been greatly overestimated and that the fifteen-million-dollar figure so frequently mentioned has never been itemized; fourth, that from such figures as we have, less than $\frac{1}{2}$ per cent of the current group of criminals of all kinds is found on parole; and fifth, states that send the most men to prison have the greatest amount of crime, and vice versa.

In addition to these annual or periodical statistics, there has been a wealth of information published in recent years as the result of research and evaluation studies in the field of crime. The three epoch-making studies of Dr. and Mrs. Sheldon Glueck are typical of much that has been done in the field of criminal research which will be of permanent value to the student and teacher.

A DUAL SOCIAL AND EDUCATIONAL PROBLEM

We are to consider the problem of that portion of the socially handicapped field which we call the offender. This designation will include both the criminal and juvenile delinquent and the lawbreaker who has not been caught. It will be advantageous to divide the subject into two main divisions. There are

two kinds of delinquency prevention, the history and methods of which we are to consider. The first concerns more accurately the prevention of recidivism, the various efforts of the government, local, state, and national, promptly to apprehend, punish, and cure the criminal. The second has to do with prevention at the source, the efforts of each community so to arrange and control its environment that crime and delinquency shall be kept at a minimum.

In both these major considerations of the problem, education has a dominant part to play. The criminal or the young delinquent cannot be prepared for his return to society unless his outlook on life has been broadened by the educational approach; nor can the children of our neighborhoods be furnished with that type of personality which will be immune to the temptations they find around them, without the active participation of the schools.

TREATMENT AND CORRECTION OF DELINQUENTS

"Our age and history, for these thousand years, has not been the history of kindness, but of selfishness. Our distrust is very expensive. The money we spend for courts and prisons is very ill laid out. We make, by distrust, the thief, the burglar, and incendiary, and by our court and jail we keep him so." Bitter as is this statement of Emerson's, it is perhaps only too true. Disclosures made in a book recently published called *Youth in the Toils*, by Harrison and Grant, indicated among many other recent studies how disastrously we have overlooked the effect upon character and per-

sonality of our present methods with the juvenile delinquent. We need to rethink through the whole process of the government's attitude to the young offender—from the moment that he is arrested, through the various processes of arraignment, trial, sentence, disposition, institutional residence, and parole. We need to think of him more as a socially handicapped person and less as one upon whom we must wreak our vengeance. A chief of police of one of the best-governed cities in America found it necessary to issue regulations to his patrolmen, urging that juveniles when arrested be treated with consideration. In spite of the continuous and deserved criticisms that have been heaped upon it, the county jail system, with all its dirt and inefficiency and graft, flourishes throughout the country. Only in rare instances does the jailer distinguish between the hardened criminal and the impressionable boy. Our courts which undertake to deal with the delicate human mechanisms which come before them should be versed in something besides the letter of the law.

If we are to undertake to improve our methods of preventing crimes, there are some preliminary things which we must do: (1) We must remember that persons charged with crime are innocent until they have been proved guilty and treat them as such. (2) We must bear in mind that we cannot engender feelings of respect in the heart of an arrested person unless we treat him in a lawful manner. (3) Whatever we undertake to do we should undertake to do competently, accurately, and in a scientific manner.

CHANGES IN PRISON AND REFORMATORY TREATMENT

We should not overlook the grim fact that even at its best, prison or reformatory treatment may have a dangerous effect upon human personalities, and we should develop all reasonable alternatives to imprisonment, such as probation and restitution. While it will be necessary for us to carry on our governmental activities of crime prevention in a strictly legal manner, and in order to do this we must be familiar with jurisdictional requirements, at the same time we will have constantly in mind that the protection of the public through the rehabilitation of the offender is our primary object. It will be important for us to set an example in the conduct of our courts, our probation office, and our penal institutions of strict honesty and efficiency in administration. We cannot teach respect for law and order, good citizenship, frugality, honesty, and industry if our institutions are conducted in a loose, slovenly, dishonest, or listless manner.

We will realize the truth of the statement made recently by the Attorney General of the United States, that all men who go to prison and all boys who go to training school *must some day come out*, and our redemptive process will be especially pointed to that end. This will justify the attempt to reëducate the personality of the offender and it will make necessary the period of aftercare and supervision which we call parole. Realizing that this process of eliminating crime through reëducation is still in its formative stage, we will in frankness and candor frequently submit the results of our effort to evaluation.

The history of society's attempts to punish criminals into submission does not make pleasant reading. It was not more than 150 years ago that history records 60,000 criminals as having been put to death under the reign of one English monarch. Margaret Wilson, in her book, *The Crime of Punishment*, records that bitter chapter in England's penal history when thousands of convicts were sent to Botany Bay and other antipodal colonies, one third of whom died en route or on arrival. These attempts to solve penal problems were simple but strangely ineffective.

But after the conscience of the community revolted against such wholesale barbarity and these expedients were discontinued, there seemed nothing left to do but to put the lawbreaker in prison and keep him there indefinitely. Jails and prisons have existed for a long time, not as places of punishment necessarily, but as secure structures where men were kept awaiting other kinds of torture or disposition. It is probable that the use of prison as a place of punishment developed quite by accident.

If one were compelled only to consider the day of commitment to the prison, the problem would not be so difficult; but when one realizes that all prisoners must some day emerge, we are confronted with a whole new group of penal problems. It did not take long for early prison reformers to find out that little in the way of protection was thus contrived. Generally, if men's lives were spared, they were sent to prison only to come out more depraved, more desperate, more dangerous, than when they entered. The whole movement for

reformation in prison concerns itself with the attempt to protect ourselves from this result.

FOUNDATIONS OF CONSTRUCTIVE DISCIPLINE

There are those who say that it is impossible to punish men and rehabilitate them at the same time, but there is some convincing proof that a well-administered reformatory system which has for its object the imposition of constructive discipline, with the very considerable deprivation that inevitably accompanies a prison sentence, may succeed where a prison system which relies only on repressive measures has failed. If we are to undertake prevention of crime through the reëducation of the lawbreaker, there are certain fundamentals upon which we must insist. The management of the reformatory or training school must be undertaken by those high-minded, public-spirited men who are educated for the purpose. Civil service should be made to apply to all such institutions, and the difficult business of "curing" the offender in an institution should be made as much of a career as that of retraining any other kind of socially handicapped people.

We should see that the work that we are trying to do in any institution is properly interpreted to the public, not through self-seeking or unfair publicity, but through a simple acknowledgment of the difficulty of the task and an appeal for greater understanding and support. Those who undertake the direction of correctional institutions should not attempt to do the job alone, but should realize that they are part of a larger social effort and they should seek the coöpera-

tion of the educator, businessman, social worker, physician, and scientist. Our correctional institutions must be maintained on the plan that all inmates are to be subjected to equal and humane treatment. No unearned privileges can be permitted. The reformatory is not a place of amusement but a place of discipline. Its régime should be one calculated to provoke the respect of its inmates and teach them the important lessons of citizenship and conformity to law.

To provide that the reformatory should be a place of constructive discipline, it is not necessary that we should revert to the dungeons or the bastilles of a bygone era. The architecture of the modern institution will be strong, simple, and secure, but it will be of such a design as will be consistent with our attempt at rehabilitation. We shall so far forget our prejudices as to insist upon the provision of steady work for inmates, old and young. The economic question of what becomes of the products of prison labor is of far less importance than what becomes of the human output of our institutions; and it is difficult to see how we can reëducate the shiftless, lazy individual into a law-abiding, useful citizen unless we can habituate him to a life of industry.

REEDUCATION FOR CITIZENSHIP

Given a situation where we have trained men in charge, strict discipline, freedom from unearned privileges, suitable architecture, and work for all, we come now to the outstanding problem in our present-day treatment of the prisoner.

This problem is education for citizenship. If all

that we desire of a prison is that it make men miserable, our task is a comparatively simple one. Punishment could be administered by the most ignorant and imposed without discrimination among the prisoners, but you cannot reform men until you know them and their needs individually. This is the underlying requirement in our correctional institutions today, a common-sense system of classification.

We do not mean by classification the arbitrary placing of men in classes or groups, but we mean rather individualization. The family, social and industrial data of each prisoner should be compiled into an individual case history so that he may be placed in the proper class or category and all the rehabilitative forces of the institution brought to bear in proper proportion upon his individual case. A classification committee becomes or should become the dominant factor in the modern institution. The operation of a classification committee prevents tyranny, favoritism, or indulgence. It brings to bear the sum total of the wisdom and toleration of the staff and officers of the institution upon each man's problem. It prescribes the kind of treatment that he should have, the measure of custody, the necessity for schooling, work, and recreation, and the treatment of physical or mental defects; and it reviews his progress and recommends his parole. Thus do we attempt to substitute a scientific approach to the problem of the socially handicapped for the prejudiced, arbitrary imposition of punishment at the hands of one man, such as a deputy warden. It would be idle, however, to provide a classification system unless we also furnished the paraphernalia of reform.

EDUCATIONAL OPPORTUNITIES IN CORRECTIONAL
INSTITUTIONS

Schooling must be available for those who need it, and it must be that type of education peculiarly suited to the offender — and, if he is an adult, to the adult offender. This kind of prison education will relate itself to the problem of rehabilitation and will go hand in hand with the trade training of the inmate. It will be conducted by men who are fitted by personality and training for this delicate job, and not by some low-browed prison officer who wants to earn a few extra dollars or even by a highly educated prisoner who would rather teach school than shovel coal. The Department of Corrections for the State of New York, with the guidance and help of the faculty of Teachers College, Columbia University, is making a striking demonstration of what can be done in the reëducation of even the adult criminal, and the low crime rates in New York State are beginning to reflect the wisdom of this policy.

The religious education of inmates will not be overlooked. Probably the usefulness of the old-time prison chaplain has passed away forever, but the new type of virile, friendly, scientifically minded spiritual adviser who can discuss personal problems with the inmate still has a place in a penal institution. Recreation should never be undertaken in a correctional institution merely as a means of whiling away the time, but as a method of building up the body and soul, teaching lessons of sportsmanship and group living, and developing sound and healthy mentalities, which are so easily warped in

an institutional régime. While in the modern correctional institution every person from the warden down to the fireman will be a social worker, there will nevertheless be ample field for persons trained in the art of case work. The gathering of case histories, the discussion of social problems with the inmate, his preparation for parole, the making of contacts with his family, and the coöperation with social work agencies on the outside offers a growing field for usefulness.

A majority of prisoners today are family men. Their problem is the problem of the neighborhood from which they come and to which they must return. A school teacher will find many a challenge growing out of the presence in the school of the children of a man in such an institution. Not only is his future at stake, but theirs likewise depends upon the intelligence and humanity which we give to the solution of his problem.

We will also realize that much as we may pour education into an inmate, unless some method of self-expression is provided for him, unless he is permitted to create as well as absorb, his education is incomplete. The Dead Sea in Asia Minor is dead because it has no outlet, and the personality will soon die (unless it explodes in the meantime) if it is not given an opportunity for self-expression. Riots, disturbances, and demonstrations in prisons do not just happen because of the inherent depravity and truculence of the inmates. They are sometimes due to a faulty method of reëducation and reform.

Finally, the educational experiment in prison will succeed to the extent that it is democratic in its approach. Many examples can be cited of the notable

success of modern wardens and superintendents who have substituted a measure of democracy for the old methods of autocracy and arbitrary control.

In this very brief summary of the opportunities of a correctional institution in the education of its inmates, we have recited some general points which are largely applicable both to the adult criminal and to the juvenile delinquent. There will be differences, of course, but they will be those of degree. The custody of young offenders may be less close. There will be a larger emphasis upon grade-school education and exercise and less upon daily work. The matter of rewards and punishments may be given especial attention in the case of the younger personalities. But, by and large, the same principles of administration apply to adult institutions and to juvenile training schools, and without their recognition and adoption the attempt to redeem this large group of socially handicapped citizens will be difficult if not impossible of success.

PREVENTION OF CRIME AND DELINQUENCY

With reference to the matter we have discussed in the previous section there is admittedly a difference of opinion. There are those who insist that the more we attempt to educate the prisoner the more we mitigate the deterrent force of his punishment; that if a prison becomes merely a school or hospital or playground, then it will not fill the rôle originally intended for a penal institution — namely, to make men sorry that they committed a crime and to deter others from offending. The weight of opinion, however, which

seems to be supported by contemporary evidence, is that severe brutal punishment does not necessarily act as a deterrent. In addition to this fallacy, society is subjected to a constant stream of released prisoners, many of whom may be less able and willing to live in law-abiding fashion. But it is indisputably true that the crime bill in this country is tremendous compared to countries in western Europe. We cannot keep up the endless procession, putting men in prison and turning them out recidivists, and after a number of attempts to secure a job for them finding ourselves obliged to sentence them to prison again. Even assuming that the benefits of a wise parole system could be extended to all discharged prisoners, even granting that the kind of an ideal prison system referred to above might greatly reduce the danger of recidivism, we still find inherent difficulties in the attempt to rehabilitate and punish at the same time.

But on the question of the prevention of crime at the source, there is generally found unanimous agreement. Whether you believe in punishment or reformation or a mixture of both, it is easy to accept the statement that prevention of crime is more important and promising of success than is punishment of it after it has happened. With all the researches recently undertaken into the causes of crime, the effectiveness of various penal and corrective agencies, and the evaluation of community programs, there has been one common conclusion reached, and that is that the method of preventing crime at its source is the sensible one to adopt.

A MEAGER HISTORY

• Many and varied are the theories as to the cause of crime. In most instances probably there is no single cause, but a combination of causes — personal, psychological, hereditary, environmental — but in the search for causes scientifically minded students are giving to us some extremely valuable findings. The sociologist has noted time and time again the close relationship between inadequate social conditions and the prevalence of crime. The psychiatrists Adler, Healy, Glueck, and others have pointed out the inevitable sequence from mental disturbance or frustration in school children to truancy, to delinquency, and to crime.

In considering the history and methods of this kind of delinquency prevention, there is not much to be said historically. Most of our effort at the control of crime has been direct, governmental, and punitive. It is a development of the last two decades, this insistence on prevention of crime at the source. As a matter of fact, though, perhaps the most effective kind of crime prevention at the source is done unconsciously. The experience of our communities in this country at least shows this, that where our neighborhoods have concerned themselves successfully with problems of health, poverty, and leisure time, crime has abated. It is only recently that we have begun to group these activities under the heading of crime-prevention activities. While slum conditions in the community on the one hand or the presence of unadjusted personality deviations in the individual on the other are known to be precursors of crime, and while the

duty of any community with reference thereto seems plain, it will be recognized that problems of surpassing difficulty arise in the attempt to prescribe the methods of crime prevention at the source. There is no short cut to this kind of crime prevention. Its methods include all the methods which make a community a safer and more wholesome place in which to live, but the arguments which prove the importance of this approach and the challenge to community efforts which it holds forth are too cogent and too powerful to be ignored.

FACTORS IN CRIME-PREVENTION METHODS

In discussing the methods of crime prevention at the source we might divide them, roughly speaking, into three groups: environmental, influential, and personal.

Under the first group we shall consider problems of housing and slum conditions and their relationship to health and delinquency. We shall consider the importance of providing play spots and safe environments. We shall consider the purity of the water supply, the matter of fresh air, ventilation, nutrition, hygiene, and other rather fixed elements, the presence or absence of which determines the physical and moral well-being of individuals in a community.

Under the second group we shall discuss the influence of the family. What is a broken home? How is it caused? Can it be repaired? We shall see the effect that bad companions have upon the potential delinquent. We shall not try to disintegrate the gang; we shall suggest ways in which its activities can be controlled.

The influence of liquor and drugs upon the growing generation must be frankly discussed, and with the recent failure of prohibitory measures fresh in our minds we shall be forced to adopt the slower but more sure method of education.

The problem of the moving pictures, their effect upon children and adults, the amount of civic morality which they are teaching, and the various methods of control must be understood and adopted. If this important influence upon character is to be made to exercise the best influence upon our locality, the knotty problem of censorship, the problem of the dissemination of salacious and pornographic literature must be met and solved not alone through repressive statutes but through the education and determination of the community.

Under the third heading we shall find much to ponder in the recent research of scientists like Dr. William Healy, author of *New Light on Delinquency*. We cannot gainsay the proposition that the permanent environment in which the child lives has a real effect upon his character and that many young people may be prevented from enjoying a wholesome, satisfying existence where the environment is bad. Nor can we deny that there are any number of character-destroying influences which compete, sometimes all too successfully, with other influences that are beneficent. But there are children who surmount the handicap of a bad environment and who resist the temptations offered to them by deleterious influences.

We should strive to know, therefore, what are the personal characteristics in our young people which are

indicative of the kind of character that resists temptation, and what are those indices which signal the approach of delinquency and crime. For example, defiance of school authority which manifests itself in a habit of continued truancy more often than not later manifests itself in a defiance of all authority and becomes delinquency.

With the help of scientific exploration we shall discover that bad health, with such definite symptoms as carious teeth and enlarged tonsils, is symptomatic in turn of conduct disorder. Hyperactivity, marked feelings of inferiority, and overrestlessness are warning symptoms, and the individual in which they are found is on the road to delinquency.

We shall note that there are many other traits which show up in bad boys which are not dangerous in others, — for example, physical prowess, love of adventure, — fondness for reading, — but the presence of which, uncontrolled and undirected, may lead to delinquency. We shall find that some of the traits which are classed as pre-delinquent tendencies are such that they could have been redirected so that their possessors might still have lived courageous and useful lives.

WHERE REST THE RESPONSIBILITIES FOR PREVENTIVE MEASURES?

In the consideration of these three sets of influential factors we shall discuss the contribution of the existing institutions and agencies. Of prime importance we will note is the kind of guidance given to our young people during leisure time. Whose business is it in the community to undertake this very difficult form of

community leadership? And how are we training the young men and women to whom in a few years we shall look for the organization of wholesome and profitable spare-time activities?

Why has the church lost its hold upon so many of our young people, and what can be done to restore religion to its place of authority in the moral life of our communities? There might well be a little less emphasis upon sectarianism and a little closer relationship to the problems of daily life of the things for which the church stands. These are but two of the facets of a many-sided problem, but they are two which in the whole question of the relationship of crime and its prevention have never been properly stressed.

To what extent is the boy who goes wrong the direct product of parental or family neglect or misunderstanding? Apart from the consideration of the physical character of the building in which the home is located, there can be no doubt that early home influence has a profound and lasting effect. "The Children's Charter," written by the White House Conference in 1930, places high in the order of childhood's rights the following: "For every child a home and that love and security which a home provides; and for that child who must receive foster care, the nearest substitute for his own home."

Since Joanna Colcord's convincing disclosures in her book, *Broken Homes*, domestic anarchy, incompatibility, and the separation of parents have been regularly assigned by all investigators as the causes of juvenile delinquency. The Gluecks found that 91 per cent of their 500 delinquent women came from broken

or poorly supervised homes. It is of interest, therefore, to find in a recent New Jersey survey a disposition on the part of convicts to absolve their families from blame for their predicament. May we conclude from this study that whatever compulsion to crime comes from the family, it is more likely to be of economic or sociological origin than any intentional spur to delinquency by the family or parents themselves? Intentional incitement to crime may be missing in the home, but it may contain many potent if unconscious elements which make for social or moral deterioration.

There are in every community a number of social agencies made up of persons presumably expert in the art of helping the unfortunate, the underprivileged, the diseased, and the helpless to help themselves. Do these agencies recognize to the full the fact that crime is a social problem and not an individual one? Do they insist that the building of character is of greater importance than the giving of relief? Do they shy away from the man with the prison record or from the family which has one member in jail, or do they accept their full share of responsibility for the community in which they work, for the existence of conditions which make criminals possible? It was reported recently that a boy of sixteen, in a northwestern city, had stolen 250 automobiles. Most persons would say, "Well, what kind of boy is it that would do such a thing?" The social worker's reaction should be, "What kind of community is it in which 250 automobiles could be stolen?" The boy did not pile them up in his back yard. He could not have successfully accomplished the

theft of 250 cars unless a certain portion of the community was in league with him.

OPPORTUNITIES OF THE PUBLIC SCHOOLS

But at the top of the list of these community agencies which assume their share of the responsibility for crime prevention at the source you will find the public school. There is no reason why the school should take over responsibilities of the home and the church in the matter of character formation. Nor do I see anything to be gained in comparing the estimated cost of crime with the cost of public education. I am prepared to admit that the more we undertake campaigns of education the less we will have to spend on crime. Recent figures disclosed by the President's Advisory Committee on Education prove that point. A table, printed in the appendix to their report, indicates that, with some deviations, the more money spent for education per child in a given state, the fewer crimes there are known to the police in that state.

The schools of the country will not only furnish teachers and educators for the rehabilitation of the socially handicapped, but they will to the extent that their programs of education are effective greatly assist our communities in preventing the recruitment of this group. There are good and sufficient reasons why the schools must take the leadership in this kind of crime prevention. In the first place, they enjoy to a great extent the confidence and coöperation of the people themselves. In the second place, throughout this country common school education is practically universal. There are but few children who do not come within

the sphere of influence of some school teacher. In the third place, teaching is a learned profession. The school teacher, male or female, is still a leader in the small community in which he or she moves. And fourth, children and young people in school are in an attitude of receptivity. The school does have an opportunity unmatched by any other social institution. That the influence of the school on the conduct of children is a powerful one has been repeatedly demonstrated. The good scholar usually marches on to become the good citizen.

The poor scholar, the one whom school does not interest, becomes a truant, and truancy is the prelude to delinquency. The opportunity of schools to teach character is a challenging one, one that the family circle is sometimes not able to meet. The school meets this opportunity not simply through the exemplary attitude of the school teacher but through the wise handling and solution of group problems involving ethical considerations as they actually arise. The proper handling of these life situations may lay foundations for ethical conduct throughout the lives of the students.

One hardly recognizes the primitive school buildings of a century ago in the institutions of the present day. A row of benches with a desk, in front of which reading, writing, and arithmetic were taught, has evolved into a huge character-building organization in which the physical and mental health of the pupils has become a fundamental concern. The pupil's trade training and the choice of a vocation; the use of his spare time in school gymnasiums and swimming pools; his

relationships to the community; parent-teachers' associations; visiting teachers; alumni societies; socials; school community centers; and programs for the reduction of maladjustment and of delinquency such as have recently been started in New York City, are among the newer responsibilities accepted by our school system.

It is inevitable, therefore, that school teachers of the future must not only be proficient in the subjects which they have selected to teach but in the wider and more important field of character formation. Such effort by our schools will not be legally or obviously crime prevention, any more than good social work, leisure-time activity, or the inculcation of religious principles will be legally crime prevention, but in very essence it will be crime prevention at the source.

COMMUNITY RESPONSIBILITY IN PREVENTION OF DELINQUENCY

If we are to succeed as a community in the prevention of delinquency at the source, we must ascertain the causes, we must provide the remedies, we must know the solutions, we must insist upon their adoption. The agencies which we support, either publicly or by private contributions, must serve the general purpose of community betterment. We must know something, as citizens, about the relationship of our crime bill to inadequate social conditions in our own neighborhood. It is not entirely a matter of providing a certain number of agencies and expending a sufficient amount of money for paraphernalia, although these are fundamentally necessary if a community is to succeed in the prevention of crime. There must exist indi-

vidually and collectively a higher ethical compulsion. No better word than "morale" can be used in this connection. Our politicians and our leaders are just as good or as bad as we want them to be.

The other thing we need is community organization. We have the wisdom and the knowledge, and the instrumentalities to provide the kind of civilization of which we can be reasonably proud. Organization brings results, but everybody seems to be organized but the common people. Some method must be found for the common people to remedy the existing situation in their own interest. It will not do merely to provide a league or council of social agencies, nor can any of the existing fraternal orders, service clubs, or other purpose groups do the whole job.

The nearest approach to adequate community organization today is found in some of the newly named Community Coördinating Councils, especially prevalent in California. But these new instrumentalities succeed only in proportion as they secure and retain the active and disinterested coöperation of the people themselves. Sheldon Glueck, in his book, *The Prevention of Crime*, describes the efforts of twenty-four widely separated localities in America where different methods have prevailed and varying approaches to the task of crime prevention were undertaken. These represent but a small proportion of a number of enterprises of this sort going on in this country today. Cities, towns, counties, whole states, school districts, have in countless instances set out to evaluate scientifically their status as a community, to search for the causes of crime and delinquency, to enumerate their

resources and to prescribe methods whereby the situation may be improved. All of this heads up under the name of a crime-prevention movement, largely because it is popular to relate such an effort in this way, partially because the neighborhood can sometimes be appealed to through fear more effectively than through patriotism.

One is inclined to agree with the conclusion of Clifford R. Shaw of Chicago, that a community must as a whole resolve to do away with crime before such an accomplishment will be realized. In this way not only paid reformers, but tenement dwellers, government employees, politicians, socialites, straphangers, school teachers, in fact, all the common folks who make up the community, must make up such a movement. They are the people whom the politicians respect and obey. They are the people who, once aroused to the possibilities of organized, united action under subtle, intelligent, and unselfish guidance, can really prevent delinquency.

Chapter Nine

WHERE NEXT?

THE ineffectual early story of the handicapped has been told and the trends in the different movements for their education have been traced. As area by area has been considered, strong conditioning factors have appeared which influenced the attitude of peoples toward those who deviate from the normal. Great figures and personalities have passed over the scene, leaving their imprint upon the evolving concept of change. Fantastic treatments and theories have risen and fallen. From the winnowing of the centuries has come much chaff—and a little wheat.

It has been seen, in this procession of progress, that basic medical sciences led for a time; but before the worker with the handicapped was ready to make his eventual contribution, practices of modern clinical medicine had to develop and to be proved. Likewise progressive methods of education, stressing freedom, individual needs, and treatment, had to come to the fore. Then, and only then, could effective treatment and curricula for the handicapped form a part of this great scene. The education of the handicapped, because of its complex nature and needs, must *follow* rather than *lead* the culture and the sciences.

As has been shown, the common policy of destruction and abandonment has been followed by policies of ill-conceived humor, religious and social exploitation, fantastic explanations of causation, and unenlightened treatment. Some of these measures have persisted even to the present day.

Despite these barriers of retardation, the education of the handicapped has progressed. It has been a slow march of progress, however — sometimes too meticulously concerned with fundamentals, again approaching ideals of enrichment and inspired instructional methods far beyond those found in so-called normal situations.

To the uninitiated the program of modern education of the handicapped seems a miracle. Those who helped to bring it about know that hard work is the molding force, for the tools with which they have worked are, even now, none too sharp or appropriate.

Great leaders have come and gone. Knowingly or not, their purpose was that of the culture. And the purpose of the culture, whether in terms of general education or of education of the handicapped — granted that it has been well concealed at times — is, and always has been, the creation of a being not only socially acceptable, but also of optimum economic value and assets. Mistaken personalities also appeared on the screen. Personality conflicts became wedges driving strong and charitable movements apart, as in the work with the deaf. The data from trial-and-error experimentation, wisely or ill conceived, have been turned too rapidly into dogma or, at times, subject to sane or vapid interpretation. Leaders conflict; how much more so have theories. Yet this will always be true.

Even today the handicapped themselves are interpreted on the basis of their greatest liabilities and not their total assets. The successful handicapped have been accepted through the ages as essentially normals.

Inability to make social adjustments, rather than the type and extent of the handicap, has probably been the real barrier to the handicapped's socialization as a group. The adjusted deviate faded into the oblivion of essential normalcy or essential symmetry. No human being can score perfect by any known general scale.

Because of specialized and urgent needs, the care and education of the handicapped have not been concerned beyond the problems of normal education. A new approach, a new point of view, are necessary if the emerging dynamic program of training is to be built on a firm foundation. Intelligent action by thoroughly prepared and understanding specialists will mark its success or failure.

In this new program, genetics will assume an important rôle. Anthropology, philosophy, psychology, and medical and other sciences will contribute richly. Sociology and economics, dominant now in fields of normal education, will become increasingly important aspects of general education for the handicapped.

Nor will the new program neglect or forget the inspirational pioneer work done in times past. Names and personages will assume new meanings. Often, workers with the handicapped will delve into historical records to find help and encouragement in the stories of great leaders. Appreciative recognition will be accorded to the number of contributions made, both to education and to science, by the handicapped themselves.

Indirect contributions made to the improvement of educational practices will no longer remain unrecognized. Few know even now that Rousseau visited

Pereire's school for the deaf, blind, and feeble-minded children and came away to write *Émile* and other essays stimulating the naturalistic or child-centered trend in education.

Diderot and Locke, both influenced by the work of Valentine Haüy, made their contribution to the associational theory of acquiring knowledge.

Modern educators humanize the teaching of subject matter through social units, though usually without credit to the "live language lessons" for the deaf, early developed by Abbé de l'Épée and his followers.

Seguin exerted great basic influence upon the present psychological approach to educational problems.

The whole vocational-guidance movement in this country really spread from an effort to minister to the socially handicapped children of immigrants in slum areas. Indeed, the handicapped are still the best laboratories for the future development of this work.

The field of the handicapped has been one of great attraction to philanthropists and others having human welfare at heart. The work is so diversified that the opportunities for the good of handicapped humanity are almost limitless. Furthermore, it is common to obtain in properly selected situations greater values than in many other fields of philanthropy. The Laura Spelman Rockefeller Foundation made possible for a comparatively small sum two conferences for a study of the problems of the deaf and the hard-of-hearing, under the National Research Council. The results of this study will influence educational policies for many years. So excellent was the foresight of the group that the subsequent Report of the White House Conference

in these fields was essentially a recapitulation of the earlier findings. These still serve as a guide for programs in these fields. The distinguished list of names on the boards of trustees of most institutions is in itself proof of the quality of interest in and support of the work with the handicapped.

In all probability, when the activities of Dean William Fletcher Russell of Teachers College, Columbia University, are recorded, his greatest contribution to education may well be the formation of the first complete and fully recognized Department of Education of the Handicapped. Through this action he paved the way for the complete acceptance of the educator of the handicapped as an integral part of the educational fold.

Persons in public life have very consistently supported the cause of the handicapped. From comparatively early American history the interest of the White House has been felt. Indeed, certain Presidents have had, in one way or another, important contact with the handicapped.

As a young man, Grover Cleveland taught at the New York Institute for the Education of the Blind. Later he was instrumental in securing a government appointment for Captain Keller, the father of Helen Keller, and in this way helped to make possible her remarkable achievements.

When James A. Garfield was a country school teacher, he had among his pupils a boy with a speech defect. This boy was so humiliated by the ridicule of his classmates that he would have left school had it not been for Garfield's friendship and encouragement. This pupil was B. A. Hinsdale, author of many books

on history and government, and later president of the University of Michigan.

Woodrow Wilson revealed his interest in the handicapped through calling the first White House Conference, to consider means for improving child welfare.

Herbert Hoover emphasized the growing interest by calling the second White House Conference on Child Welfare and Protection.

Franklin Roosevelt, himself of the handicapped, has sponsored the battles against infantile paralysis and the medical care of such victims as need it.

At least one "first lady" of the White House, Mrs. Calvin Coolidge, had had actual experience with the handicapped, for before her marriage she taught in a school for the deaf.

To what extent, then, will the experiences of the past aid in solving the apparently new problems (yet perhaps age-old) of today and tomorrow?

Interpretations of history are often misleading and sometimes dangerous. Was or was not, for example, Aristotle hostile to the handicapped? Was that the reason for their sad treatment in his time? Or was it something else, perhaps a slowness of the culture in that direction? There is a suspicion today that the philosopher in the headlines (and Aristotle was of that type) does not necessarily express the view of his times, but rather that of himself. Nor may he be so much exerting influence as creating amusement and diversion. Likewise who shall state whether the success of Henry Ford, as the pioneer large employer of the handicapped, is based on sound social-mindedness, far-sightedness, or keen business insight?

To predict the future of the work with the handicapped from its past or present is impossible at this time. The past has, it is true, revealed the lesson of things to do and not to do. But the future is unpredictable, generally because of present social conditions. From the past it has been seen that the handicapped's fate and treatment have not always followed the general trends for normals. It is difficult to determine what is being done in the present because of widespread propaganda. Do present practices represent truth, hope, or the figments of imagination? It is reasonable to expect that whatever turns society may take, the interests and welfare of the handicapped will be viewed no less favorably, though probably more horizontally, than the present period of progress which represents the high point in their care and education.

Even if predications are difficult, certain obvious needs of the field stand out. The basic need is for research, directed not solely to the analyses of social trends in the interest of the handicapped, but to means of improvement — methods, materials, the sciences in their definite application to the handicapped's specific and known needs.

A second need is for further surveys of the types and incidence of the handicapped and what is actually being done for them. Data are very meager and probably not too accurate. It follows logically that if surveys are needed, consideration must be given to the personnel dealing with the handicapped and their professional assets, liabilities, and requirements.

The third need, therefore, is for the regulation, support, and advancement of personnel training for the

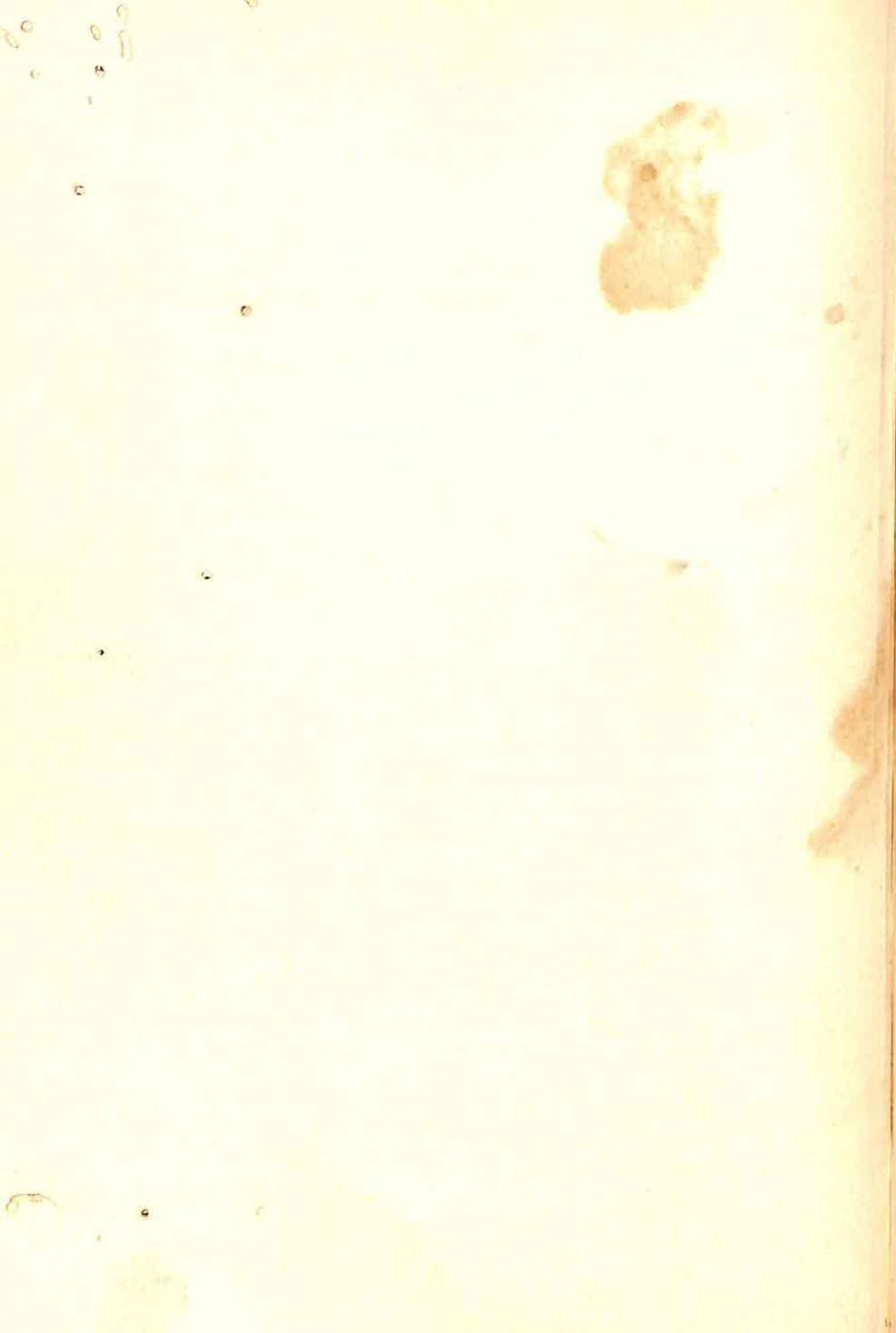
work, with definite emphasis upon preparation of the classroom teacher. A very few strong programs for teacher training, set in schools of education, in universities of large resources, offer the most economical and promising answer. It is a moot question whether public funds should be allotted to this type of teacher training. This must be solved. A change in the type of training is also advocated. Historically teachers of the handicapped have been trained primarily as technicians, not as educators. They learned in the school of experience as disciples or cadets, thus ingraining programs and also, too often, transmitting faults while missing strength.

It follows logically that the work with the handicapped has, in the main, attracted the devoted rather than the career seeker. Overworked, underpaid, and underprivileged, as well as educationally starved, the teachers of the handicapped have fought nobly both for their charges and for professional improvement. Too great tribute cannot be paid these splendid pioneers. But the future teacher cannot be built on past patterns. The challenge of the modern program commands a new and a different point of view and preparation. Academic degrees and general training have become of increasing significance. Research can no longer continue to sacrifice to service. Inevitably the work with the handicapped has been living on its capital. The past has been insufficient in its contributions. The present, except in terms of better organization and, to some extent, of better social conditions, has added but little.

Of all the above contentions there is ample proof

and justification of the thesis that the work with the handicapped of the future will have to stress the united front. Vocational problems, one of the most distressing parts of the present picture, apparently cannot be solved by single areas but as a whole. Never, of course, will any area lose its identity; but all will be strengthened when united on a broad front.

In the companion volume, to be published shortly, existing work with the handicapped will be presented in terms of the common and area problems; the solutions and puzzles of the moment; trends as far as can be determined; and a further and more specific tabulation of the needs of the work if its future is to be as brilliant and profitable as its past and present.



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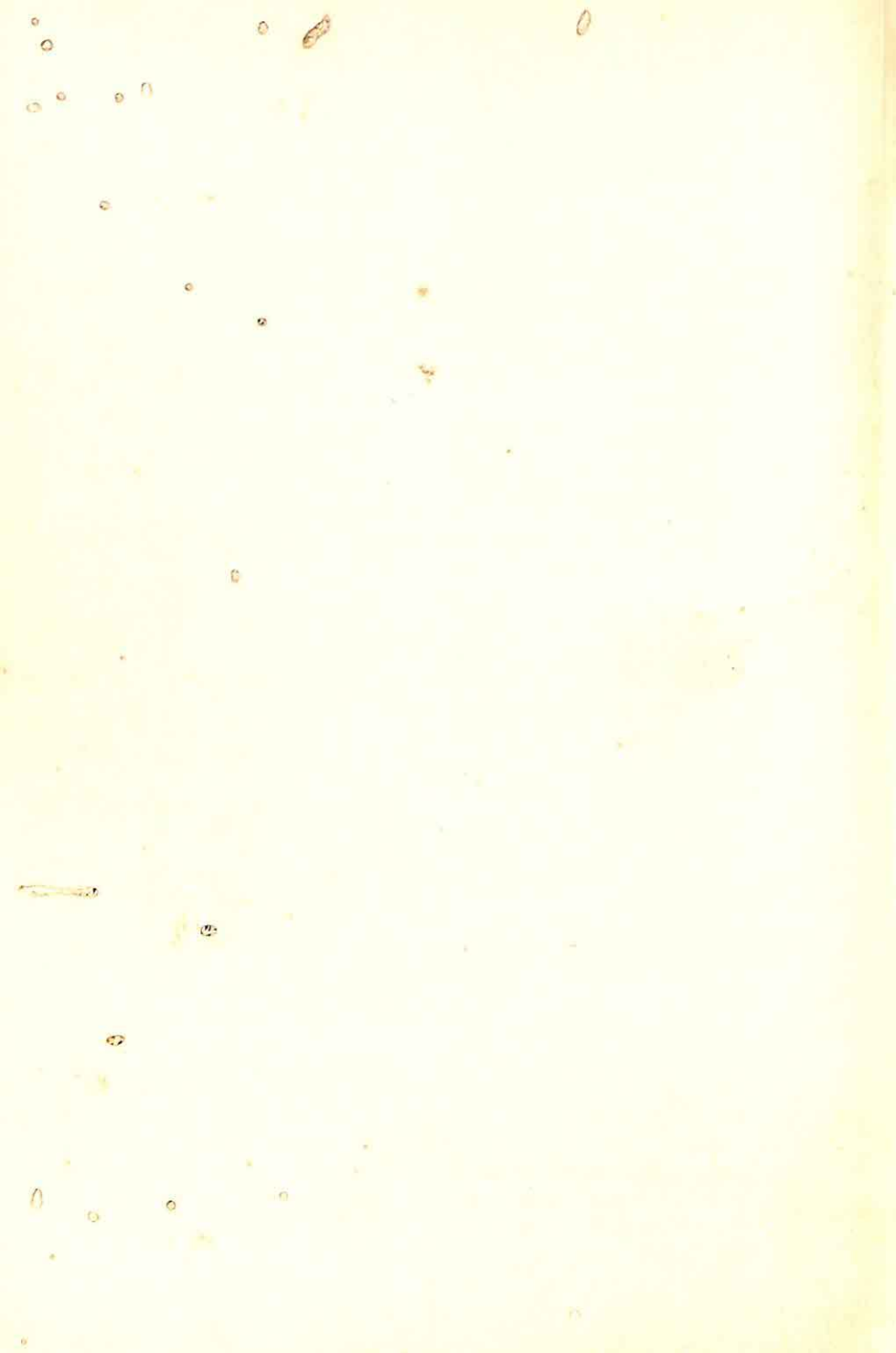
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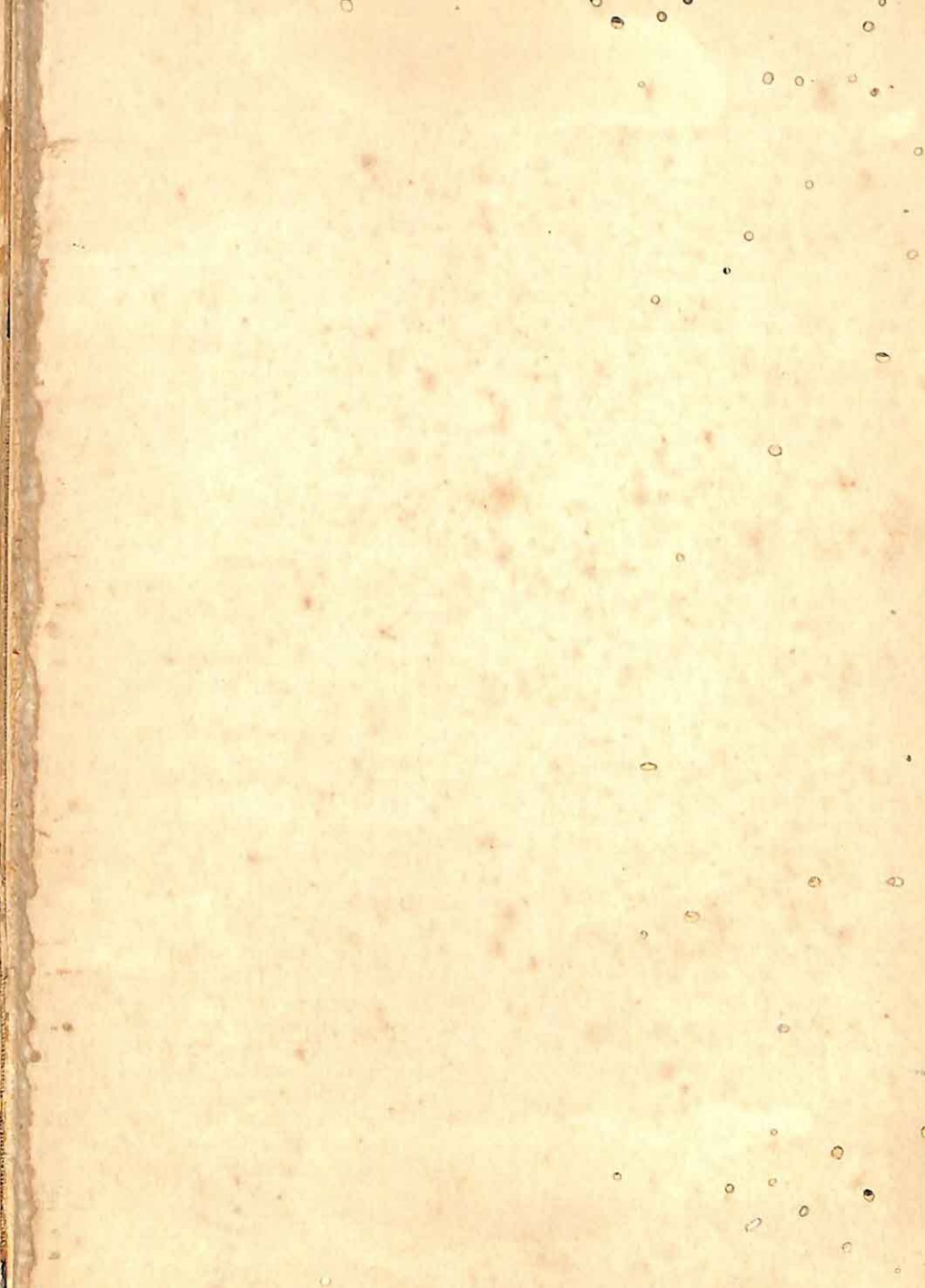
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